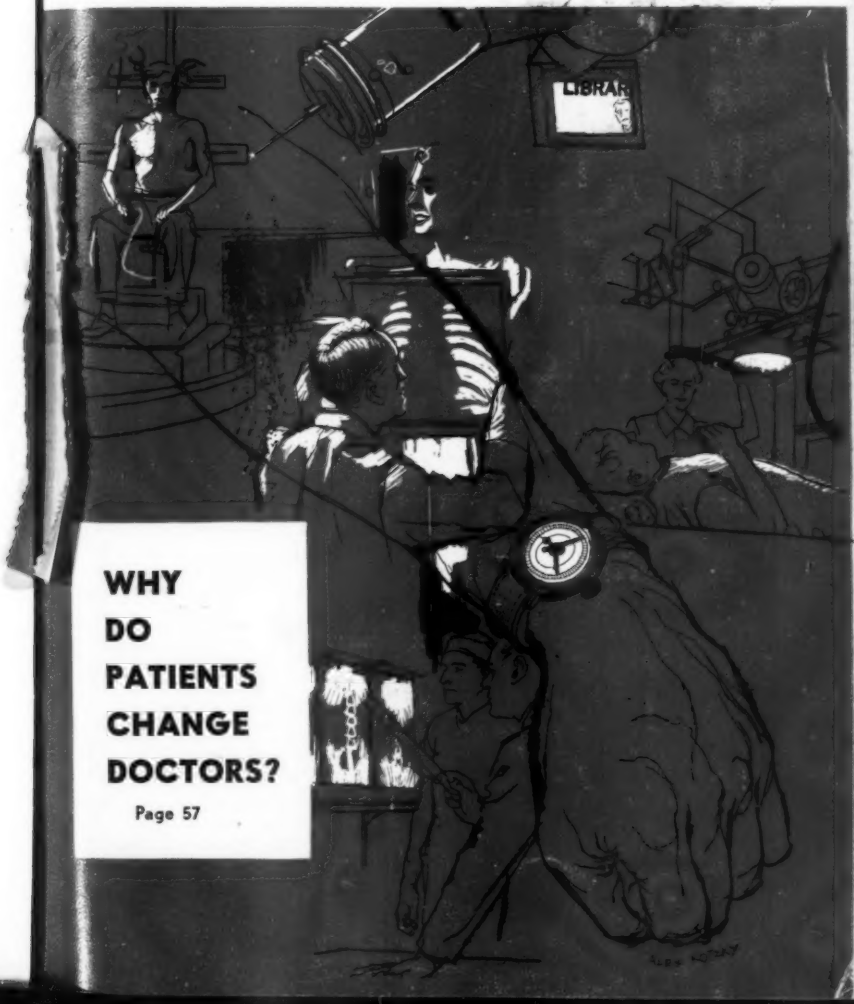
Resident Physician

Journal for the Hospital Staff Officer

WHAT'S HAPPENING TO STIPENDS?

GP vs SPECIALIST: HOW THE CONFLICT BEGAN



WHY DO PATIENTS CHANGE DOCTORS?

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Resident Physician

January 1959, Vol. 5, No. 1

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The Resident Physician is published monthly on the fifteenth by The Resident, Inc., with publication offices at 34 North Crystal Street, East Stroudsburg, Pennsylvania. Executive, advertising and editorial offices at 1447 Northern Boulevard, Manhasset, New York. If undelivered, please send form 3547 to Resident Physician, 1447 Northern Boulevard, Manhasset, New York.

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Resident Physician

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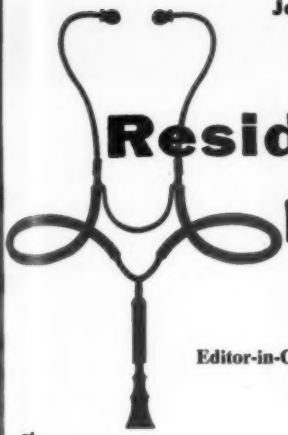

Resident Physician

January 1959, Vol. 5, No. 1

Articles are accepted for publication with the understanding that they are contributed solely to this publication, and will directly interest or be of practical value to resident physicians. When possible, two copies of the manuscript should be submitted.

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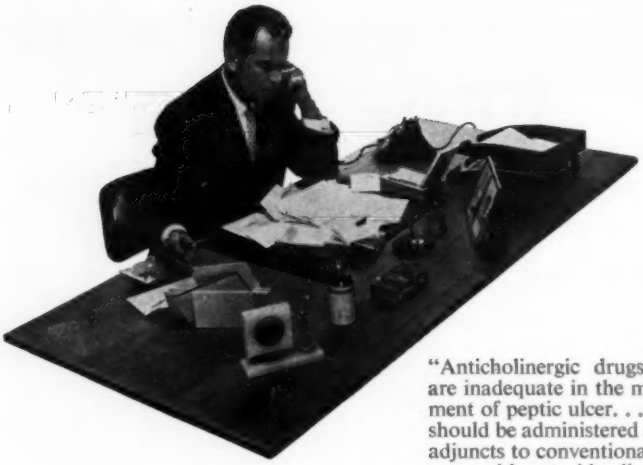
Resident Physician



"Anticholinergic drugs alone are inadequate in the management of peptic ulcer. . . . They should be administered only as adjuncts to conventional treatment with antacids, diet, sedation, and other therapeutic measures."[1]

1. Kirsner, J.B., et al.: M. Clin. North America *41*:499 (March) 1957.

In peptic ulcer: six aids to total management

ALUDROX SA is not only an effective anticholinergic, but also an antacid, sedative, demulcent, anticonstipant, and pepsin-inhibitor. Thus, one convenient preparation satisfies six requirements of total peptic-ulcer therapy.

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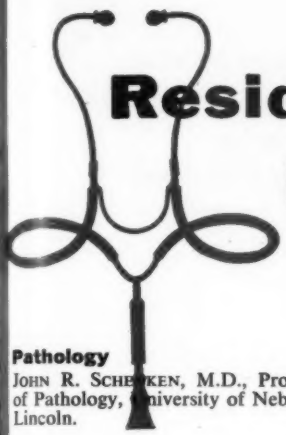

Resident Physician

Therapeutic Reference

The following index contains all the products advertised in this issue. Each product has been listed under the heading describing its major function. By referring to the pages listed, the reader can obtain more complete information. All products are registered trademarks, except those with an asterisk(*).

ACIDTYPES *from the Gelusil Family Album* **FATHER**

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Viewbox Diagnosis

Edited by Maxwell H. Poppel, M.D., F.A.C.R.,
Professor of Radiology, New York University College of Medicine
and Director of Radiology, Bellevue Hospital Center

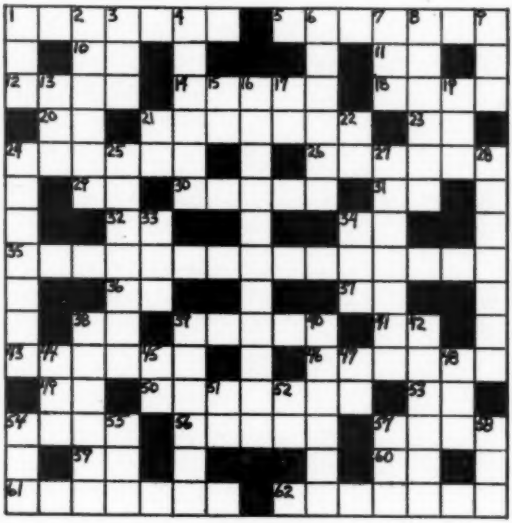
What Is Your Diagnosis?

1. Lues
2. Hypertrophic changes due to pulmonary disease
3. Local vascular disease

Answer on page 185

Resident Relaxer

(Answer on Page 185)

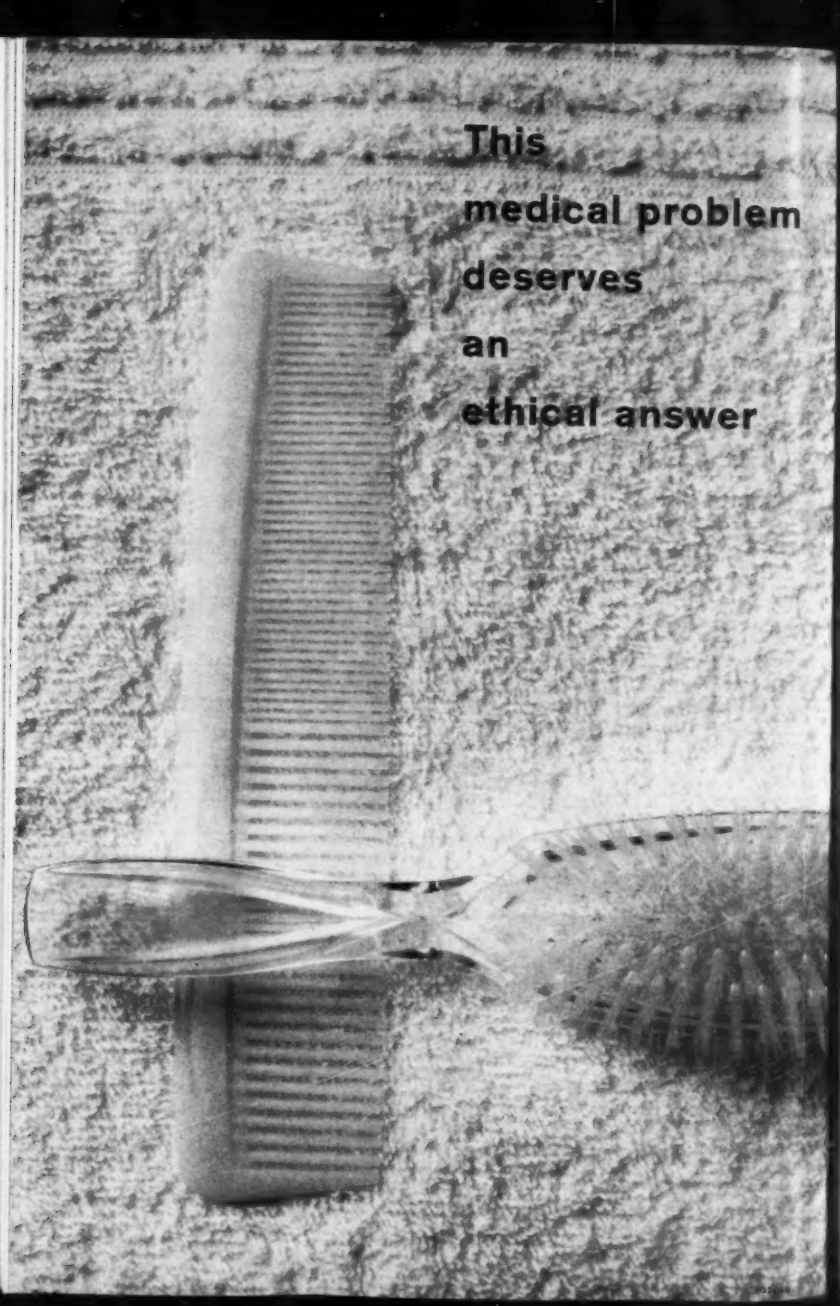


HORIZONTAL

1. Stopper in blood vessel
5. Mentagra
10. Present indicative of "to be"
11. Veterans Administration—Abbr.
12. To ravish
14. A thicket of small trees
18. Period of greatest intensity
20. Protoactinium—(Chem. symbol)
21. Canals conveying liquids
23. Ruthenium—(Chem. symbol)
24. Calcium Phosphate on teeth
26. Cessation of use
29. Abbreviation of age—(Latin)
30. German bacteriologist — 1877—helped to find test for syphilis.
31. Youth Movement. Abbr.
32. Atomic—Abbr.
34. Indium—(Chem. symbol)
35. Relating to the mind
36. Helium—(Chem. symbol)
37. On the dorsal side—Abbr.
38. Denebrium—(Chem. symbol)
39. Fleshy (slang)
41. Samarium—(Chem. symbol)
43. One who makes inspiratory noise while asleep
46. Excreta
49. Abbr. of "before dinner" (Latin)
50. Relating to mankind
53. Silicon—(Chem. symbol)
54. Combining form denoting defect of eye
56. A viscid secretion of the mucous membranes
57. Crumb or grain (Latin)
59. 14th letter of alphabet (Pronunciation)
60. Arsenic—(Chem. symbol)
61. Any ear-shaped appendage
62. Any perceptible change in the body or its functions indicating disease

VERTICAL

1. The organ of hearing
2. Secundipara
3. Suffix indicating carbohydrate
4. Lesions of mucous surfaces
6. Produces returns or results
7. Egg (pl.)
8. Vertebral column forming pelvis
9. To perceive
13. Antipernicious anemia factor—Abbr.
15. A bone
16. Of mental origin
17. Selenium—(Chem. symbol)
19. A genus of rats and mice
22. Silicon—(Chem. symbol)
24. Trephines
25. One who instructs
27. Fusion of a pair of chromosomes
28. The presence of pus in any cavity
33. Definite article
34. Congealed water
38. More sluggish (Slang)
39. Fluid from action of bromine on alcohol
40. Consisting of, or like yeast
42. To lend aid or help
44. A short sleep
45. Symbol for oxidation-reduction potential
47. Glucinum—(Chem. symbol)
48. A habit contraction
51. Mouse unit. Abbr.
52. 13th letter of the Greek alphabet
55. Species of the cuckoo family
57. A chart
58. The upper extremity


This
medical problem
deserves
an
ethical answer

No. 4 in a descriptive series on Abbott specialties

Dandruff is a chronic nuisance to some 70 million Americans. Yet strangely enough, few patients will think to ask you about it. They don't seem to realize their dandruff is a *medical* problem.

Instead they are simply enduring their discomfort. Or turning to their barber or beautician. Or to a succession of publicly advertised "cures" for dandruff.

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Letters to the Editor

Unsigned letters will neither be published nor read. However, at your request, your name will be withheld.

Additional Advice

To all syndromes there are tentative diagnoses. And in every case, it takes the patient's reaction and comments to evaluate the efficiency of the treatment.

As to the sensible article written in the last April edition by Mrs. Elizabeth Beltran relative to the treatment for resident's spouse, may I advise to add: "Warning—may be habit forming . . . . "

Micheline F. Mojdehi
New York, New York

Interesting Articles

I wish to thank you and express my appreciation for sending me monthly the RESIDENT PHYSICIAN free of charge. I am a resident in internal medicine at the Huron Road Hospital of Cleveland, Ohio and am planning to take an additional year in general practice residency training at the Euclid Glenville Hospital of Cleveland, Ohio, before entering private practice. In your journal I have always found very interesting articles and, being a foreign graduate, your advice is invaluable.

Pasquale Ambrosio, M.D.
Huron Road Hospital
Cleveland, Ohio

Etiquette and UMW

I have a question on medical etiquette: I will soon complete my residency and I have considered a salaried position in the Miners Memorial Hospital in Eastern Kentucky and West Virginia. I would like to know the medical profession's feelings in general toward a colleague who

—Continued on page 36

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—Continued from page 32

accepts such a position; would it jeopardize my professional standing with the Medical Societies, qualification for Board examination, and my professional relationship in general? Any help or suggestions that you give me will be appreciated.

Name withheld
at writer's request
Shreveport, Louisiana

• *Your letter was referred to the State Society in the area of your proposed practice location and also to your specialty board. Their replies are printed below.*

It would be my opinion that if a physician has completed approved training in obstetrics and gynecology and thereafter confines his practice to the specialty in an approved hospital that the financial arrangements have no bearing on the situation.

L. M. Randall, M.D.

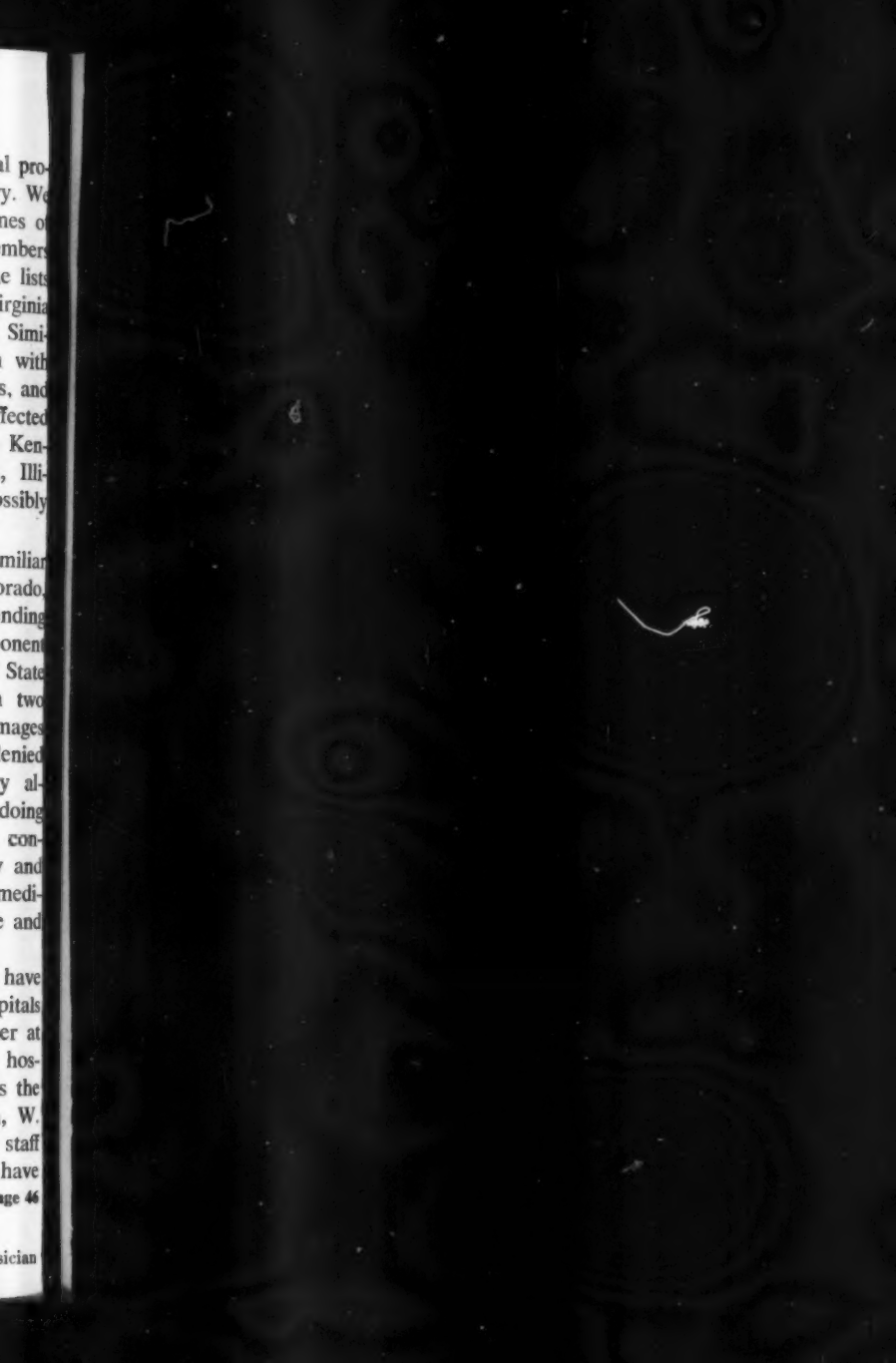
Assistant Secretary
American Board of Obstetrics
and Gynecology
Rochester, Minnesota

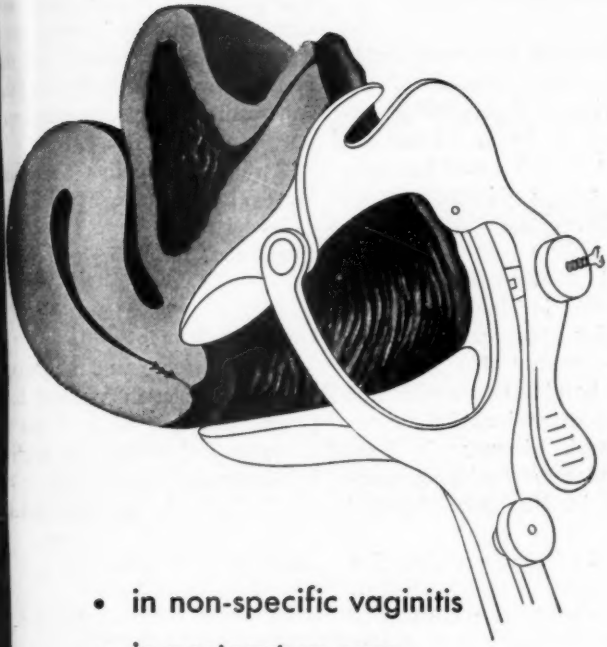
It is a little difficult to answer the letter from your inquirer due to the fact that there have been UMW developments over the period of the past few months, principally in the large coal producing areas of the country. We are informed that the names of nearly a hundred of our members have been deleted from the lists of physicians in West Virginia approved for UMW work. Similar action has been taken with reference to a few hospitals, and the same program has affected physicians and hospitals in Kentucky, Ohio, Pennsylvania, Illinois, Colorado, and possibly other states.

I am sure that you are familiar with the situation in Colorado, where there is a suit now pending against members of a component society of the Colorado State Medical Society, in which two physicians are seeking damages because they have been denied membership in the Society allegedly because they are doing UMW work. There is also controversy in Ohio, Kentucky and Illinois between organized medicine and the UMW Welfare and Retirement Fund.

Here in West Virginia, we have two UMW Memorial Hospitals one at Beckley and the other at Man. There is also such a hospital in Kentucky just across the Tug River from Williamson, W. Va. Several members of the staff at each of these hospitals have

—Concluded on page 46





- in non-specific vaginitis
- in postpartum care
- after vaginal surgery

Triple Sulfa Cream

TRADE MARK

Ortho

—Concluded from page 36

been accepted into membership in component societies of the West Virginia State Medical Association. So far as I know, no member of such a staff has been denied membership because of participation in the UMW program.

What a component society might do in the matter of application for membership from a member of a staff at a miner's hospital is a matter that must be determined by the society itself. Licensure in West Virginia is a prerequisite to membership in the State Medical Association.

Our By-Laws provide that each component society shall be the judge of the qualifications of its own members, and election to membership in a component society automatically carries with it election as a member of the State Medical Association and the American Medical Association.

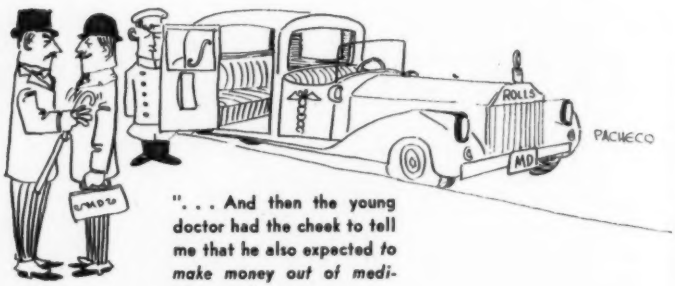
Charles Lively
Executive Secretary
West Virginia State Medical Association
Charleston, West Virginia

Language Booklet

Will you please send me a copy of your booklet in medical language (German, etc.). I am in Germany and would find such a booklet useful. Thank you.

Julius L. Bedznek, M.D.
Captain, U.S. Army
2nd General Hospital
New York, New York

• *Booklet on the way.*



". . . And then the young doctor had the cheek to tell me that he also expected *to make money out of medicine . . .*"

Perrin H. Long, M.D.

Editor's Page

Preparing for a Subspecialty

One of the early problems facing residents today is whether to become a general surgeon or an internist, or to specialize in a branch of surgery or internal medicine. The correlative question, *when* to take the work in the specialty or subspecialty, is a part of the same decision.

In surgery and the surgical specialties the "when" is pretty well defined by the various American Boards. But in internal medicine the candidate for a diploma is allowed one year of his program for concentrating in a subspecialty, the where and when to be determined by the resident.

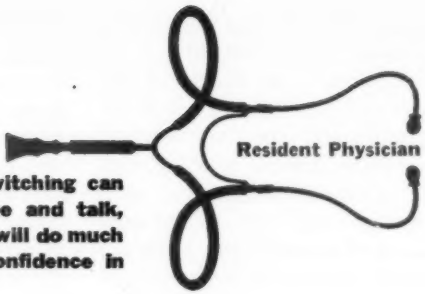
In hospitals in which required undergraduate teaching is done, patients are rarely concentrated according to categories of disease. In other words, there are no cardiac, gastro-enterological, infectious disease, or other types of wards or services. The reason for this is that the medical student, intern, and for that matter, the resident must be brought into contact with a number of diseases during his ward clerkship, and patients therefore are distributed to the wards in a random manner. It is only when one reaches into the postgraduate fields of medicine that concentrations of patients having the same disease are occasionally found in ward services. Of course these

statements do not apply to contagious diseases or tuberculosis, or to certain specialized hospitals. Thus, in most teaching services, if one desires a specialty year, one has to plan for a special position or obtain a traineeship or fellowship to go elsewhere.

The question of timing then arises. When is the best time to take this year? From the point of view of a specialized residency, the Editor is convinced that it should be in the third year of the residency period. However, in general, it is believed by many medical educators that before developing a specialized interest in internal medicine, it is best for the resident to have finished the full three years of the general medical program, and then seek a traineeship or fellowship in a specialty or for research.

There are a number of advantages to be gained by taking the subspecialty training year after the general medical residency. To begin with, the resident has seen more and should be more mature. Secondly, he should have a better idea of what his real interests in medicine are. Thirdly, as a general rule, committees or agencies which grant trainee or fellowship funds appear to be more favorably inclined to grant such funds to matured individuals who have a clear idea of what they want to do. Fourthly, the individual, as a rule, settles down and gets more out of his specialized work because he knows that he will soon be applying what he has learned in the practice of medicine. And last but not least, the chances that he will do well on his specialty board examinations are increased.

Perrin H. Long.



Most cases of doctor-switching can be prevented. Tact, time and talk, according to the author, will do much to build the patient's confidence in the doctor.

Why They Changed Doctors

John A. Ewing, M.D.

For many years in my hospital specialty practice I've been interested in why a patient will change doctors. When a patient talks about what Dr. Brown said or did and then mentions Dr. Smith, I've asked, "Why did you change doctors?" Dr. Brown may wonder why his patient quit coming to him but he rarely gets the opportunity to find out. Here are some of the answers I have been given.

Obviously some of the reasons given me are phoney. Often enough the patient may not *really* know why he changed doctors and may merely give a rationalization.

Pseudo

Perhaps he changed for some unconscious reasons such as feeling anxious with one specific doctor or guilty about his feelings toward him in some way. However, human nature makes us want to feel in control and to feel we know *why* we do things, so very often the patient will think up some excuse which satisfies him at least.

Of course even a pseudo-reason is interesting if only be-

cause of the never ending variety of ideas people think up!

However, I do not doubt that many of the answers given to my question are nearer the truth than just mere fiction. Looking over my notes of the last 100 such answers I find that definite categories of reasons occur. These are worth examining provided you keep in mind the limited sample and this fact: These are not the reasons that patients leave *you*. They *are* the reasons given by 100 patients for leaving 100 or more different doctors.

I will show the number of times each answer or group of answers was given. This is not an overall percentage but *is* the number of times it occurred in *this* particular group of 100 patients.

Unavoidable change (38 cases)

This category runs together all the changes which were *forced* upon the patient by circumstances, often to the patient's sorrow. Even the best-loved physicians die, and patients sometimes have to move their home. Of course you and I know of patients who travel from one city to the next to see their favorite doctor, but more usually a change of physician occurs.

Other reasons here: The doctor was drafted; the doctor moved away.

Avoidable change (62 cases)

At least in some cases to be listed here the switch from one doctor to another might have been avoided. I will break this

ABOUT THE AUTHOR

Born and educated in Scotland, the author was graduated from the School of Medicine of the University of Edinburgh in 1946. Beginning a psychiatry residency in England in 1947, he received the University of London's Diploma in Psychological Medicine in 1950. Coming to the United States in 1951, he worked in a state hospital as senior physician, and as psychiatrist in North Carolina's Alcoholic Rehabilitation Center for three years.

Author of papers in several psychiatric journals and in the *New England Journal of Medicine, British Medical Journal, Medical Economics, Medical Times,* and others, Dr. Ewing is presently assistant professor of psychiatry, University of North Carolina School of Medicine, and director of the psychiatric inpatient service, North Carolina Memorial Hospital.

group into sub-categories depending upon whether the reason seemed to lie with the doctor, or with his aides, or with the patient.

Physician (23)

No one reason occurs frequently here. Four patients complained that the doctor did not come on house calls or at least was grudging about it. Another four said the doctors were too rushed, too busy, unable to give them the time and attention they wanted. Three physicians were described as unsympathetic by their ex-patients. Either this could be really so or could be just the feeling these patients got with these doctors.

People want their doctor's full attention when they are sick: Two complained that he talked too much and didn't seem to listen, and one woman took offense when he kept interrupting her story to take phone calls.

No doctor can please everyone. Two patients complained that their doctor didn't seem to want to give them a thorough physical examination, but another one (a middle-aged man) didn't go back because the doctor insisted on examining him!

Two patients complained that they didn't like to have to wait to see their doctor and changed to men who offered appointments.

One patient felt unhappy and changed physicians after she told her usual one about having gone to a chiropractor. She was disgruntled with the results of that treatment and guilty enough already. When the doctor bawled her out about it she didn't return.

Possibly the next example is unjustified, but one female patient "felt sure" she smelled alcohol on her doctor's breath and has never returned to him to check her first impression.

One patient "nearly fainted" on her first (and only) visit to one general practitioner. It seems he had a glass fronted case in his office with some peculiar looking instruments in it. To her they might just as well have been torture implements.

Privacy

The final patient in this section has a pretty good reason for the change if his comments are to be believed. He had attended this doctor for a long time and continued to go when the general practitioner moved into a brand new office. Apparently the new building wasn't too solidly built.

At least the patient discovered as he sat in the waiting room that you could hear most of what was said in the doctor's office even though the door was closed. He felt that he ought to have absolute privacy in his talks with his doctor, so he took his business elsewhere.

Discussion

One important matter about these observations is that it is apparently rare for any patient to *tell* the doctor what the trouble is. In these cases listed the patient changed physicians without attempting to give the present one a chance to do anything about the problem as the patient saw it. Often the doctor would welcome knowing about these minor criticisms and would try to do something to improve matters.

Of course we've all met the patient who's only too ready to criticize. But the people I'm talking about here apparently prefer to slip away quietly rather than say what they feel.

Our only solution is to offer them plenty of openings:

"Is there anything else you would like to talk about, Mrs. Jones?"

"Get this prescription filled, Mr. Brown. I've asked you lots of questions today but, before you go, is there anything on your mind to tell me?"

"Do you like my new office set-up, Mr. Smith?"

Some of our patients can grasp at such an opportunity to express a gripe or to point out the need for some improvement. There's little doubt that the patient will be less likely to change doctors if he's talked about his feelings in our office.

We, in our turn, must accept such comments gracefully—never sarcastically or angrily—and give all suggestions our earnest consideration. If we can't carry out his suggestion we should tell the patient why.

Nurse or secretary (10)

Again, the difficulties occurring here are quite avoidable. No fewer than five patients didn't like the manner of nurses or secretaries as they kept patients waiting because the doctor was late. I did not list this as a fault of the doctor because sometimes lateness is unavoidable. However, a good secretary or nurse handles the situation in positive terms, makes the patient feel almost glad to wait for a busy and important doctor who is on a vital call, and offers alternatives if the patient can't sit down patiently. The complaints of these patients were

directed toward aides who were quite negative: "Doctor is out. You'll have to wait." Worse still: "I don't know when he'll be back."

Four others complained of the manner of the nurse or secretary in general. The fact that all four patients are women is probably significant. It is more than humanly possible that aides would talk less affably to some women patients than to men.

The final patient in this group complained of the "hospital smell" of the doctor's office. I list this here because I feel that a discerning nurse would see to it that the atmosphere was fresh.

Our main hope for improvement here is in discussing the handling of such situations with our office helpers. Often we can tactfully give a patient an opportunity to comment about this:

"I'm sorry you've had such a long wait, Mrs. White. Did my nurse explain what the problem was?"

Patients (29)

This is the largest category of "avoidable" reasons and maybe it would be larger if people were completely honest. Many physicians would expect that in this group would be some people who changed doctors just because they owed the first one money. Certainly such deadbeats do exist but they tend not to incriminate themselves! Nobody in my present group of one hundred patients admitted changing because he owed money. This is a group of patients largely made up of private patients of the middle income groups. There *were* two patients who complained of feeling that their doctor charged them too much. Your guess is as good as mine as to whether they paid that particular bill.

Expert

Four patients felt (without discussing it with the physician) that they needed medical attention from some other doctor whom they felt to be more expert as regards their own needs. This included the transfer from a general practitioner to internist (two cases) or from general practitioner to general practitioner because of feeling that the second one had some special interest or aptitude. For example, a man changed to another doctor because he "heard he was good with ulcers."

It is encouraging to notice that rarely if ever does a change occur because of doubts about the doctor's professional competence. Only one patient stated flatly, "I

quit going to Dr. X because he was a quack." I have no personal knowledge of Dr. X except that he seems to prove highly acceptable to many other patients. This critical man described his distrust in these general terms but never did get down to explaining *why* he felt that way.

It might be felt that patients prefer not to criticize one physician to another. While this is often true I don't feel that it explains the lack of direct criticism leveled at the doctors in this series. Patients come to the hospital I work in from long distances and from an area containing thousands of doctors. It would be unlikely that a patient would hold back because of fear of criticizing a friend of mine. Certainly it has seemed far more common to hear apparently petty complaints rather than real distrust of the practitioner.

Age of doctor

An interesting group of patients expressed a feeling of trust in a doctor according to his age. Some wanted a younger man "because he went to school more recently." Others wanted an older man "because he's more experienced." One patient changed to a woman doctor because she felt more at ease with her.

Certainly the desire for an older or younger physician is probably unconsciously based and is not too rational. It might even disappear if the patient talked it out with the present doctor. The trouble is, though, that they never did. It's possible, of course, that some patients do talk over such feelings and as a result stick with the original doctor. That way they also avoid getting into my statistics!

Three patients just didn't get what they wanted from their doctor. Apparently he didn't concur with their self-diagnosis or their expectations about treatment. Perhaps if he'd asked what they thought, they'd have talked it over and then accepted what was medically correct without trying to change doctors.

One patient changed because the doctor prescribed antibiotics and she had "read they were harmful." Apparently she had recently seen some article about the dangers of excessive use of antibiotics and she condemned the doctor on the strength of this without telling him her fears.

Two patients reported changing doctors when a new man opened up a new office near their homes. In general, though, it seems to me that doctor-loyalty is pretty high and that people

rarely change doctors just because there happens to be one living next door.

Unusual

Perhaps the most unusual of all the answers was that of a man who is a rather hen-pecked individual in his forties. According to him he changed doctors when his wife's old family doctor died. At this point the wife transferred her loyalties to the husband's doctor who thereupon quietly changed to another physician. Apparently he was willing to share his bed and board but not his personal physician!

Ten patients remain to be accounted for and I am not sure that their movements can be explained. Six of these gave such confused or mixed stories that I have been unable to classify them. The remaining four seem to me to be habitual changers who do not really *know* of any reason for making changes nor do they usually attempt to find any explanations. Apparently these people take it for granted that they will constantly go shopping around and they expect other people not to be surprised. My impression of them was that they were anxious, tense people who were not really aware of what they were seeking in the doctor-patient relationship.

My overall conclusion from this survey is an encouraging one. Doctors are rarely criticized as often as one might think from the stories about malpractice suits. On the other hand patients *do* change doctors for relatively slight reasons, many of which might be avoided. Certainly it would seem that at least one-half of the above cases might have been avoided if the doctor or his aides had taken greater care. Changes which stem largely from reasons within the patient do seem to be least likely to occur if the doctor has a good relationship with the patient and has inspired a feeling of confidence. Many of these people had only minor gripes but did not feel that the way to handle them was to talk them over. This points to our constant need to encourage our patients to talk about how they feel. Certainly some of the most easily avoided changes are those based upon relatively insignificant problems which could be solved if only the patient would talk them over. If there is any one lesson for us to learn it must be that we should never be too rushed to ask the patient, "What do you think?"

GP *vs* SPECIALIST:

How the Conflict Began

The origin and pattern of the present struggle between physician groups can be found in the development of medical education from the 16th century.

Lester S. King, M.D.*

Much as we might like to hide it, there is today a real conflict between different groups of doctors, particularly between specialists on the one hand and general practitioners or generalists on the other. The roots of the conflict are multiple, reflecting many unresolved tensions demanding relief.

It is not, however, ordinarily realized that the problems which beset us today have their almost exact counterpart in earlier centuries.

The superficial appearances, the dress and the trimmings are different. But sweeping aside the disguise which often obscures historical phenomena, we find past details that are relevant to our present difficulties.

The early sixteenth century was a period of revival of learning. It was a time of revolt against authority, the breakup of institutions which had persisted for hundreds of years, and a search for new forms and new means for meeting new environmental challenges.

There were tremendous social, economic, political, and religious upheavals. And the medical profession, caught in this turmoil, had to make its own adjustments.

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Today when we speak of the medical profession we have in mind a group of individuals with a definite training, carefully regulated by their own organizations and by the state. In the early sixteenth century there was no medical profession in this sense. Instead there were larger numbers of people who practiced the healing arts; they differed widely in education, ability, and in social status. In general, four groups can be readily identified: physicians, surgeons, apothecaries, and quacks.

Physician

The physician was a member of the learned professions. Originally, at Oxford, the M.D. degree required fourteen years attendance. The bachelor of arts degree required four years; the candidate had to spend three more years to become a Master of Arts. He was then eligible to start the medical curriculum, devoting three years to the degree of bachelor of medicine and four more years to become a doctor of medicine. (By the time he had secured his M.A. degree, he had passed examinations in the cultural subjects, including rhetoric and philosophy, and only then was he considered qualified to begin the study of medicine.)

Analogy

The student might enter the university at 13 or 14, the first seven years of his education comparable to our preparatory school and college. The seven years spent for the bachelor and doctor's degrees in medicine compare with our medical school plus internships and residency.

Students, then as now, were prepared to enter practice by the time they were 27 or 28 years of age. Of course, less capable students might be older when they started the curriculum so that, then as now, a physician could be well over thirty before beginning his life work.

Two corollaries are apparent. A profession which requires a large part of a man's life as a training period can attract but few members. Consequently, physicians were in demand. As a result, their fees were high. The analogy to the present day is obvious.

Apothecary

Physicians, however, were only one small portion of medical practitioners. A second group was the apothecaries. Originally shopkeepers, they were grocers who specialized, so to speak, in medical herbs. Their function was to prepare the drugs which the

physicians had prescribed.

There were no schools of pharmacy at that time; training was solely by apprenticeship.

Schooling was no hindrance but educational standards were of a low order and it is fairly clear that the members of this profession were of a lower social and economic group than the physicians. The apothecaries broke away from their parent group, the grocers, and in England formed a separate society in 1617.

Surgeons

The third group of medical practitioners was composed of surgeons, or barber-surgeons. The barbers had received a royal charter authorizing them to practice surgery as long ago as 1462. A separate guild of surgeons joined the Company of Barbers by 1540, and the barbers and surgeons remained together until 1745. The surgeons like the apothecaries were also trained by the apprentice method and did not have high educational standards.

Of these three groups, the physician was the director, while the surgeon and apothecary, in theory at least, carried out his orders.

A fourth group of healers, having neither the education of the physician nor the formalized practical experience of the apothecaries or surgeons, was the quacks, individuals who having decided to treat the sick, forthwith proceeded to do so.

The group included the well-meaning and the vicious, simple empirics and downright frauds. They ranged from the well-meaning lady of the manor who visited all her sick tenants and gave them home-made remedies, to the deliberate and vicious charlatan, or anything in between. Such irregular practitioners carried out a significant proportion of the total medical activity of the day.

The quacks and charlatans, always with us, remained outside the mainstream of medical practice. The principal struggle involved the apothecaries and the physicians, and it was these two groups that rehearsed the present day conflict between general practitioners and specialists.

Conflict

Although the apothecaries were originally under the direct supervision of physicians, this state of affairs did not last very long. The attentive apothecary, noting what the physician prescribed for a given ailment, then himself prescribed the same thing

when he saw an ailment he considered to be similar. A present day comparison? If we imagine the drugstore clerk recommending various remedies to his customers. The pharmacist is supposed to give the patient only what the doctor orders, and is not himself supposed to prescribe. However, if someone comes in and asks, "What's good for a cough?" or "How can I get rid of this headache?" the pharmacist might possibly recommend some medicine doctors frequently prescribe. It could be argued, that since the pharmacist does not set himself up to treat patients and does not charge for his advice, that he is not breaking any law. He gets paid only for the bottle of medicine which (after the name of the medicine has been suggested) the patient himself requests.

Of course, today there are federal regulations governing the dispensing of numerous medicines, as well as other direct and indirect sanctions against this type of practice.

But as recently as 30 to 40 years ago such "drugstore practice" was not at all uncommon. And 300 to 400 years ago it was the rule. The apothecaries learned from the doctors whose orders they carried out. Since educated and trained physicians were few and expensive, the medical needs of the community required such accessory practitioners, who not only served the physicians, but also competed with them.

Monopoly

This great chaos of medical practice produced important changes. Pressure groups tried to secure some particular advantage for themselves. In late medieval and early Renaissance times the pressure group became a guild, the ancestor of our present day professional organizations such as the College of Surgeons or College of Pathologists. A guild was an association of individuals with special training or skills who banded together to promote the welfare of their own group. This they accomplished by securing a monopoly. Within a given area only a member of the closed group could practice his profession or trade, and the police power of the community would keep out all nonmembers. It was indeed the prototype of the completely closed shop.

The excuse for a guild, or a monopoly of similar type, was that the public would benefit thereby. The Company or Society or Association or College had to render a *quid pro quo*. The guild

was able to establish standards of performance. It could hold its members to very definite requirements, and could punish those whose work was not up to the required minimum. By guaranteeing these standards of performance, the guild could satisfy the public need for adequate skill. At the same time, by establishing a monopoly whereby only the members of the guild could practice in a given locality, the guild members could benefit themselves economically.

Practice

There is in economics the well known "Gresham's Law" which states that bad money drives out good. The cheap and common commodity will displace the expensive and rare. It was similar with medical attention. Physicians who had spent long years of training and who possessed what they thought was exceptional skill, found that untrained people were setting themselves up as medical practitioners, and drawing away the patients. The physicians, in defense, formed their own college, and sought a monopoly of medical practice. However, the number of physicians was far too small to meet the medical needs of the community, and the fees the doctors charged were far too high to come within the means of the great mass of population. Consequently the surgeons and the apothecaries, who had also formed their own companies and guilds, continued their own type of practice in a relatively independent fashion.

In theory only the physician could prescribe medicine and charge for his advice. In practice the physician would charge, say, a guinea for a consultation. This money was a fee-for-service, the service consisting of advice founded on expert knowledge. To implement that advice, the physician would give a prescription which the apothecary would fill and charge for in appropriate fashion. The usual charges were about two shillings each for the various juleps, pills, boluses, electuaries, vomits, purges, or clysters which formed the current remedies.

If, however, an apothecary saw the patient first, he might recommend various compounds. Since his only income derived from the sale of medicines, and since he could not charge for his advice alone, the apothecary never let the patient get away without abundant medicines duly paid for. Now, most patients ordinarily recover from most ailments. If all went well, the apothecary was

quite content, performing a very useful role in the community. But if all did not go well, the apothecary would speedily call a physician to take over the case and to assume the responsibility. The physician would thus correspond to a present-day consultant.

This situation has a strangely modern sound. There was a large number of apothecaries actively practicing medicine. A relatively small number of physicians corresponded to our modern highly trained specialists.

Family doctor

The apothecary was in essence the family doctor. He knew the people in the community or in his immediate neighborhood, visited the home, or saw the patient in his shop. He did a great deal of actual physical work in preparing and administering the drugs, as well as in letting blood, or even performing other minor surgery. He worked hard and for relatively low pay. If the apothecary were to make a living he had to be sure he sold the patient a large quantity of drugs.

In their competition with the physicians the apothecaries had a very potent weapon, namely, the power of calling consultations. Whom should they call? — the same problem that practitioners face today. Why select one consultant rather than another? It is said that in days gone by, selection was determined not by the welfare of the patient but by the kick-back, rebate, or fee-splitting that the consultant offered.

Without discussing mid-twentieth century practices, we can say that in earlier periods a type of fee-splitting was very widespread. However, it took a form at which even the most rigorous income-tax expert could not cavil. The apothecary who called a consultant expected that the latter would first of all praise the conduct of the case to date; and then would order abundant medicine which the apothecary would provide. If not, if the physician objected to the conduct of the case, if he denigrated the abilities of the apothecary, or failed to order enough drugs, then the apothecary would call some one else another time. The physician, after seeing the case, pocketed his fee and left his prescription. The apothecary, who took no fee, nevertheless could furnish the medicines and was quite confident that the family would entertain a good opinion of his abilities, and would call him the next time.

For the most part the apothecaries and physicians got along

fairly well, in a relationship of symbiosis. Sometimes—and there are well authenticated cases—the apothecaries would mulct the patients shamefully. From time to time the College of Physicians would prosecute various apothecaries for infringing on the college charter, that is, for practicing medicine when they had no right to do so. But cynical observers declared that such prosecutions were motivated not by the welfare of the patients but by the degree of subservience which the apothecaries showed the physicians. The physicians, indeed, had through their charter the weapon of prosecution, whereby they might hold in check the more arrogant apothecaries; but the latter, in turn, had the weapon of referrals, which they could use to keep the physicians reasonably in line.

So long as the physicians held a strict monopoly on the legal practice of medicine the apothecaries were in an unfavorable position. Nevertheless there was an uneasy adjustment between the two parties until a drastic explosion occurred in 1703. This was a famous case at law, which I have discussed at length elsewhere.*

A patient consulted an apothecary for treatment. The bill was large and, when the patient did not pay, the apothecary (named Rose) had the patient arrested. The latter apparently enlisted the aid of the College of Physicians which brought action against Rose for practicing medicine without a license. The court found against the apothecary.

The law was clear: only a physician could judge the nature of a disease and order remedies, while the apothecary had as his function the filling of prescriptions according to the doctor's directions.

Although this might seem to have settled the matter once and for all, Rose appealed the decision to the House of Lords, which reversed the decision.

The evidence, described in my book, had indicated the stranglehold which the College of Physicians held over the medical practice, a monopoly which, were there no other kind of medical attentions, would work untold hardship on the public.

To be sure the apothecaries were, by the evidence, guilty of many unsavory practices. There was obviously evil on both sides. The House of Lords, by reversing

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* King, Lester S. *The Medical World of the Eighteenth Century*. University of Chicago Press, 1958, P. 18 ff.

the original judgment, chose the lesser of the two evils. The apothecaries were permitted to practice medicine without, in theory, being merely the servants of the physicians. The apothecaries assumed independent status, and the stranglehold of the physicians' monopoly was broken.

Of course this Magna Carta of the apothecaries raised new and thorny problems. There were still two categories of practitioners, first-class and second-class, differing in education, training and usually in social status. The one had the best academic training then available, long, thorough, and expensive. The other group lacked higher education, trained under the apprentice method, and couldn't command the prestige and authority of their more select colleagues.

Almost a century and a half was required to work out a synthesis. This came only through changed educational methods.

Development

Unquestionably in the 17th century the best medical education was to be found in Europe, in Holland, France and Italy.

However, by the 18th century the Scottish universities had developed an excellent medical education with up to date and practical teaching. Instead of remaining wedded to Galen and the classics, the Scottish schools, especially Edinburgh, soon became the leading centers of study.

In anatomy, for example, the family of Munro became world-famous, and as the century continued, the best instruction in chemistry, clinical medicine, surgery and midwifery was to be found in Scotland.

At the same time, in London and other cities there was a gradual development of hospitals used for teaching purposes. The teaching took the form of a personal teacher-pupil relationship, between an attending physician or surgeon in the hospital, and a clerk or dresser who was accepted as an apprentice.

As medical knowledge and interest progressed and hospital instruction came to the fore, it became apparent that adequate training in pre-clinical sciences was essential.

The Scottish and even the English universities offered such training, but the major hospitals were in London where there was no appropriate university. The remedy took the form of private lectures in the dissecting academies where private physicians charged their students and kept the proceeds.

Providing the cadavers for such academies was the work principally of the "body-snatchers" and led to many dramatic episodes. In addition to anatomy there were lecture courses in chemistry and materia medica.

Education

By the mid- or late-eighteenth century, any ambitious youth who wished to practice medicine no longer had to attend the University of Oxford or Cambridge for 14 years, nor even for 8 or 6 years. He could secure a much more satisfactory training by other procedures. He could, for example, apprentice himself to an apothecary for a period of years, then come to London and attend a dissecting academy and other lectures, and then could spend one or more years as a clerk in a hospital.

Or he could reverse the order, taking lectures and hospital work first, and then apprentice to an apothecary. Or he could intersperse these with one or more terms at one of the Scottish universities or one of the European schools. Educational activities were flexible. There was a great deal to learn but the order of learning was not so important. These educational transformations allowed greater mobility between the ranks of apothecaries and the physicians, and generally improved the apothecaries' status.

Mail order

The degree of M.D. by itself did not guarantee sound medical training. The Scottish universities offering excellent medical education to those who wished to avail themselves of it, unfortunately did not require any set period of attendance. It was possible to get a Scottish Medical degree *in absentia*.

Apart from necessary fees, the candidates had to submit letters of recommendations and a thesis. Neither of these was very difficult to come by. Complacent doctors were often quite free with recommendatory letters, and needy hacks could grind out a thesis for a suitable price. It is no wonder, then, that a Scottish medical degree did not carry much weight in England. Such a degree might, indeed, represent the best training in the world if the candidate were earnest and conscientious, or it might represent a purchase from a diploma-mill if the candidate were not very scrupulous.

There was great agitation within Scottish educational circles to clean their own house. While needed reforms were indeed eventually made during the 18th cen-

tury, the Scottish degree did not have the status that the English degrees conveyed.

However, the graduate of Oxford and Cambridge, although they possessed fine general educations, were not necessarily well versed in practical medicine. The degree of M.D. from Oxford or Cambridge carried great prestige and enabled its recipient to become a fellow in the College of Physicians. It did not imply progressive medical knowledge.

Practical experience was acquired in large hospitals, which the university towns did not possess. The most significant medical education — most significant, that is, from our modern viewpoint—was to be found in the large cities, especially London. As a matter of sober fact, at the end of the eighteenth century the leading British physicians, the most skilful practitioners and the most prominent contributors to medical science, were usually not Oxford or Cambridge graduates, but were those who had more practical, more modern training. Nevertheless, when evaluating the medical profession, the public was influenced by many values other than practical medical experience. Tradition played a very large part. And tradition changed slowly.

Social division

British medicine reflected the social order of the day. There was in medicine an entrenched order represented by the Oxford-trained (or Cambridge) physician, member of the learned professions, a gentleman, liberally educated, who ministered to other gentlemen on a basis of social equality. England was, before the Industrial Revolution, a nation with two major social classes, the landed gentry and the aristocracy on the one hand, the small freeholders, tenants or petty tradesmen on the other. The physicians served the higher class, the apothecaries the lower. The Royal College of Physicians, from its inception, represented education and privilege, and by charter this group controlled the practice of medicine.

Within the College of Physicians there were two grades of membership, the fellows and the licentiates. The fellows were in control and formed a self-perpetuating oligarchy. While the licentiates had the right to practice, they had no voice in policy-making.

Fellows, almost exclusively graduates of Oxford or Cambridge, constituted a tight inner circle. They allowed into their special group only those educated

like themselves, who thought like themselves and maintained the same traditions.

Professional excellence had very little to do with it. The licentiates on the other hand, many of whom had originally been apothecaries, included individuals with Scottish or foreign degrees, who could practice as physicians provided they passed the examinations. It was extremely rare for anyone ever to advance from licentiate to fellow.

Recognition

As the 18th century progressed, with industrial growth there developed a definite middle class whose demands could not be ignored. The improved positions of the apothecaries and the greater educational opportunities for medical practitioners, already mentioned, reflected this economic growth, and represented a partial response to new surging demands.

The entire situation regarding medical services we can consider a struggle for *status*. Originally the physician was a gentleman, the surgeon and apothecary were not. The latter wanted to rise in the world; physicians were not averse to this, provided their own privileges and prerogatives were not impaired.

The struggle between the two groups was one between upper and lower, between well-educated and less well-educated, between those already privileged and the seekers after privilege. And the battle among the medical practitioners was but one phase of the over-all struggle of a resurgent middle class seeking greater recognition.

Fought along many fronts simultaneously, one battleground was education. As we have seen, it was traditional that a physician should be broadly and liberally educated, and equal in general culture to the acknowledged leaders of the community, the clergy and lawyers.

As late as 1774 a pamphleteer wrote, "The character of a physician ought to be that of a gentleman, which cannot be maintained with dignity but by a man of literature. . . ." If the physician does not have the proper degree of "preliminary and ornamental learning" then, if called upon to speak on a subject such as history or philosophy, he would be ". . . immediately out of his depth . . . which is a real discredit to the profession."*

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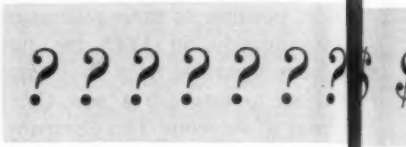
* Quoted in Hamilton, Bernice, The Medical Profession in the Eighteenth Century. *Econ. Hist. Rev. 4:* 141-169, 1951.

The physician was expected to possess not only professional skill but also high general culture. But this tradition did not apply to either the apothecaries or the surgeons. They were not expected to be widely cultured, generally educated. They were not "gentlemen." The surgeons, for example, who had joined the barbers, suffered from the relatively low social position of their colleagues. Accordingly, in 1745 the surgeons separated from their associates to establish a new Company of Surgeons. This Company, a form of guild, had a rather shaky jurisdiction and power, but nevertheless did a great deal to raise the practice of surgery to a true profession. As a corporation it helped to establish reasonable standards, but control remained with a small group of "pure" surgeons, that is, men whose practice was limited to hospital surgery, who did not engage in any sort of apothecary trade (or in what we might call general practice). There was thus called into being a group of surgical specialists who acquired high social and professional status, and who, like the fellows of the Royal College of Physicians, took good care to guard their own prerogatives carefully. By contrast, the great majority of surgeons, to make an adequate living, carried on a general family practice like the apothecaries, and as a lesser breed of surgical practitioners, had no control over the policies of the Company of Surgeons.

The concluding article in this two-part series will appear next month.

What's Happening to Stipends?

They're going up, but not uniformly throughout the nation.



As far as resident stipends are concerned, Horace Greeley's "Go West, Young Man . . ." still holds. Among three key states recently compared by RESIDENT PHYSICIAN according to changes in average resident stipends over the past six years, California was a strong leader in both dollars and percentages. In fact, California pays its residents in internal medicine and in the three-year surgery programs *an average of $100 a month more* than do New York hospitals.

The tables illustrate stipend differences between California, Illinois and New York in surgery and medicine. In each state, averages were taken of all hospitals having programs approved by the Council on Medical Education and Hospitals of the A.M.A., but excluding VA and other federally owned and operated hospitals. One happy fact: stipends are increasing at a rate which exceeds the rise in cost of living. But as far as most residents are concerned, they have a long way to go to catch up.

INTERNAL MEDICINE

AVERAGE MONTHLY STIPENDS
1952, 1957, 1958

	CALIF.	ILL.	N. Y.
1952	$151	$109	$104
1957	238	164	151
1958	254	178	153
Increase ..	103	69	49

4-YEAR SURGERY

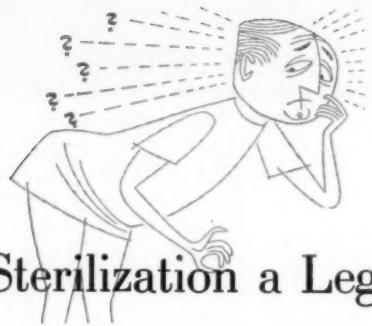
AVERAGE MONTHLY STIPENDS
1952, 1957, 1958

	CALIF.	ILL.	N. Y.
1952	$122	$ 43	$ 91
1957	211	125	147
1958	226	168	151
Increase ..	104	124	60

3-YEAR SURGERY

AVERAGE MONTHLY STIPENDS
1952, 1957, 1958

	CALIF.	ILL.	N. Y.
1952	$140	$116	$102
1957	213	191	150
1958	256	189	156
Increase ..	115	72	53



Is Sterilization a Legal Trap?

The physician is advised to be cautious in dealing with nontherapeutic sterilization, for the law governing your legal liability is not clearly defined.

George A. Friedman, M.D., LL.M.

Sterilization is a surgical or radiological procedure that prevents procreation on the part of the individual upon whom it is performed.

Sterility may, of course, occur as an incidental effect of surgery. In such cases sterilization of the patient may be a medical necessity. In other cases where sterilization incidental to surgery results because of negligence, general malpractice laws will prevail.

The subject of the legal liability of physicians, both criminal and civil, for voluntary (elective) sterilization is, however, very unclear. This article is intended primarily to raise the questions facing a physician in this field and to suggest certain precautions to be taken in view of the lack of clarity of the law on the subject.

Eugenic sterilization (compulsory sterilization imposed by the state on certain classes of the mentally ill, feeble-minded, epileptics and criminal recidivists, who are likely to produce socially inadequate offspring), and sterilization of criminals, as a punitive measure or a method of preventing crime, will be touched on only to indicate the extent of the subject.

While 29 states have enacted

eugenic sterilization laws, in most states no statutes deal specifically with sterilization of a private patient. Those few states which do (Kansas, Iowa, Utah, Indiana, Mississippi and Virginia) distinguish between therapeutic and non-therapeutic sterilization, prohibit non-therapeutic sterilization, and declare such act to be either a misdemeanor or a felony.

The eugenic sterilization laws of some states make it clear that therapeutic sterilization is legal. One such example is the Virginia Code, which reads:

"Nothing in this Chapter shall be construed so as to prevent the medical or surgical treatment for sound therapeutic reasons of any person in this State, by a physician or surgeon licensed in this State, which treatment may incidentally involve the nullification or destruction of the reproductive function."[1]

Area of doubt

What about states in which no statutes exist? Assume the subject has consented to or requested the sterilization. There is no question about the legality of therapeutic sterilization; one of the few cases dealing with the legal aspects of voluntary sterilization makes this unusually clear.

The physician advised a husband and wife of the dangers of child bearing to the wife. He suggested the husband undergo a vasectomy and the operation was performed. The Minnesota Supreme Court held that a contract to perform the operation for the stated reasons was not void as against public policy, nor was the subsequent operation illegal.

The court further expressed its opinion that even in those states which expressly prohibit sterilization the exception of medical necessity would justify a physician in performing a sterilization operation.[2]

Sterilization for non-medical reason may very well be illegal in those states which have mayhem statutes in their criminal laws. The California Code thus defines mayhem:

"One who unlawfully and maliciously deprives another of a member of his body or disfigures or disables it or renders it useless, etc., is guilty of mayhem."[3]

Some writers have argued that while castration, which so alters the personality and physical constitution of the subject, would constitute mayhem, vasectomy and salpingectomy, which do not impair hormone balance, alter personality, render the subject unfit to fight or less competent to earn a living, would not come

within the mayhem statutes.[4]

Others object to this distinction, believe that non-therapeutic sterilizations constitute mayhem, that consent to the criminal act is void for all public purposes, and further that the elements of criminal assault are present even apart from mayhem statutes.[5]

While a layman might think the word "maliciously" in the statute would save the act from being a crime, the legal definition of "malice" is quite different from its Webster's dictionary meaning, and courts will so interpret it. One court has said a malicious act is "a wrongful act intentionally done without legal justification or excuse."[6]

Risk

No case has been found of a criminal prosecution for the voluntary sterilization of a person. The possible illegality of the act is still a factor to be considered, especially in those states which have a strong policy against birth control. Even those states which allow or encourage contraception may hold such radical or irrevocable measures as sterilization to be unreasonable forms of contraception violative of the social interest in maintaining the birth rate.

A surgeon runs a definite risk in performing an operation for non-therapeutic sterilization. If death results he may well be charged with murder. The physician should keep in mind that economic reasons are insufficient justification for the operation. There must be a definite pathologic reason for the procedure, and consultation with another specialist is a minimum precaution to be taken before proceeding with the operation.

The California Attorney-General wrote an opinion in 1950 in which he said:

"The presently established policy of this state forbids the performance of a sterilization operation upon an individual . . . unless it is clearly shown that the life of the patient is in grave danger and may be lost because of a failure to perform such an operation."

Civil liability

Where consent has been obtained for elective therapeutic sterilization of a private patient no civil liability exists barring negligence. The only case directly in point is *Christensen* v. *Thornby,* discussed above.[7]

In that case the physician actually failed to sterilize the husband; the wife gave birth successfully to another child. No negli-

gence was alleged. No recovery was allowed. The court held that the operation was legal; the couple suffered no damages. On the contrary, they were "blessed with another child."

Even where negligence is alleged some courts refuse to permit recovery on the grounds that the damages are too remote, i.e., loss of possible unborn children or their services. This was the case in *Landwehr* v. *Barbas*.[8]

A wife sued a physician for the negligent emasculation of her husband. Her loss of potential motherhood did not entitle her to recover damages. A New Jersey court was able to find damages, however, in a case where the physician negligently failed to sterilize the patient-wife. The failure resulted in a need for a second operation and the plaintiffs, husband and wife, were entitled to recover for all pain and suffering, mental and physical, together with loss of services.[9]

Consent

Caution is called for in sterilization cases where consent of only one party to a marriage can effectively rob the other spouse of prospective parenthood. A husband failed to give consent to a hysterectomy performed upon his wife, then confined to private mental hospital. The physician was liable.[10]

Under ordinary circumstances, however, it would seem that a wife in full possession of her faculties may determine for herself whether she should submit to an operation. But as a matter of policy the husband's consent should be sought.

One text points out that the absence of the husband's authorization may point to a lack of faith on the part of the wife or the physician.[11] If consent of the other spouse cannot be obtained consultation with another specialist as to the medical necessity of the operation would certainly be required.

As will be seen later, consent does not always validate an operation.

When necessary?

Certain medical reasons for sterilization are generally agreed upon, including, for example, severe types of heart disease, active pulmonary tuberculosis, severe kidney disease, diabetes. In general, operations to cure a disease or defect or to protect a patient's life, as for example to prevent pregnancy where the patient's life would be endangered, are operations which are medically necessary.

Doubtful cases include operations to prevent transmission of tainted hereditary factors or diseases. In such cases legal advice on the laws of the particular state should be sought.

Other conditions, such as mild diabetes and psychiatric cases, have created differences of opinion in the medical profession. Consultation is most certainly required in doubtful cases, and wise in all cases.

In states where non-therapeutic sterilization is a crime, consent to such an operation may not save the physician from civil liability. Consent may be voided, just as in abortion cases, since a person cannot consent to the commission of a crime. This may be true similarly in states where there is a strong public policy against sterilization or contraception.

Remote damages

However, even if the wife is refused a right of action against the surgeon because that particular jurisdiction does not permit a person to benefit from her own illegal act, the husband who was not a participant in the crime may be given a right of recovery against the surgeon. Again we run into the problem of remote damages, which a court could overcome if public policy were strong enough. Again, there is no law on the subject.

Since there is a strong possibility that a physician may be liable civilly, even when there is consent, for an elective non-therapeutic sterilization he would be well advised to refuse to perform such an operation.

Surgeon diagnosed patient's case as appendicitis and obtained her written consent to perform any operation which the surgeon deemed necessary. Upon operating, the surgeon discovered the Fallopian tubes were so inflamed as to require removal. Patient thus became unable to bear children.

Patient sued doctor for assault and battery alleging an unauthorized operation. There was no recovery. The consent was general and covered the specific operation performed; moreover, since an emergency existed the removal of the Fallopian tubes would have been justified without consent.[12]

In *Roche* v. *Hull*,[13] a 1942 Missouri case, patient, the wife, consented to the removal of her appendix. During the operation the physician informed the husband of the diseased condition of the Fallopian tubes and advised their removal.

The husband authorized the doctor to use his best judgment with reference to the matter. The court held that the consent of the husband was valid since the wife was physically and mentally unable to act for herself.

Oral consent

Physician performed a vasectomy on plaintiff on oral consents of husband and wife. Plaintiff thereupon sued him for damages claiming authorization was given for circumcision, not vasectomy.

The evidence indicated that plaintiff throughout the discussion with the surgeon talked only of the "operation," while the wife talked of a "tube-tying" operation. The court held that oral authorization was valid and the question of the kind of operation authorized was one for the jury.[14] This case illustrates only too well the wisdom of written consent, even though the court said:

"The business of getting signed authorization on a formal instrument is but a rule of professional custom, laudable in every respect, but it is not required by any law.

A second surgeon assisting in the vasectomy was relieved from liability upon a directed verdict. He acted on the assurance of the patient's physician that there were written consents to vasectomy which he inadvertently left in the office.

The second surgeon was assured that the consents would be filed with the hospital. The court held he took every reasonable precaution and was entitled to rely on the assurance of the patient's physician that there were written consents, just as a surgeon is entitled to rely on the diagnosis of patient's physician without the necessity of making an independent diagnosis.

X-ray

Defendant treated plaintiff with x-rays for a skin irritation in the region of the scrotum. The treatment continued for about three weeks, with five treatments each week.

At the end of this period plaintiff suffered from x-ray burns, and became impotent and sterile. He was awarded $29,125 damages. Three experts, one in the treatment of cancer, and two in radiology, testified that plaintiff's condition would develop into cancer of a fatal type; and proper treatment of his condition would require skin grafting and castration.

They further testified that x-ray was too dangerous for a general practitioner and was not jus-

tified as the first form of treatment for skin disorder. The evidence indicated that defendant timed his excessive exposures with an antiquated alarm clock, and a yardstick was used to approximate the patient's distance from the machine.[15]

Fraud

A surgeon is not a guarantor of the results of an operation. In *Christensen* v. *Thornby* (previously discussed) plaintiff sued the surgeon in an action for fraud and deceit for failing to successfully sterilize him. No fraudulent representations as to the result of the operation were proved; nor was malpractice alleged. No recovery was allowed.

Plaintiff engaged defendant to take out her appendix. During the operation, without her knowledge or consent, defendant removed her right tube and ovary, and concealed this from plaintiff. The removal of these organs was negligently performed and necessitated a second operation, for the removal of the left tube and ovary, thus rendering it impossible for plaintiff to bear children.

Plaintiff became aware of the removal of the right tube and ovary after the second operation. The court held that the concealment constituted a fraud upon plaintiff.[16]

Statute of limitations

The question of fraud was significant in the foregoing case since plaintiff sued more than ten years after the operation. In an ordinary case the action would have been banned by the statute of limitations. Fraudulent concealment of a vital fact however tolls the statute, and it does not start running until the fraud is discovered.[17]

A physician advised the wife

not to have children. Upon completion of a sterilization operation upon her he represented it as successful and the wife continued to have normal intercourse. She became pregnant, had a difficult birth, and her health was impaired.

Some time after the statute of limitations had run as to the wife's action, the *husband* sued the physician to recover for loss of services and companionship, and for moneys expended in her care and medical treatment.

Defendant claimed husband's suit was based on his services and barred by the statute of limitations. The court held the husband's cause of action was separate from the wife's and accrued not from the date of the negligent acts but from the actual time the loss of services began.

The cause of action in this case, although based on defendant's negligence, accrued not from the time the sterilization operation was performed, but from the time the wife became pregnant.[18]

In Colorado there is a one year statute of limitations for assault and battery. The malpractice statute is two years. Plaintiff sued defendant more than one year after the operation for wrongfully performing a vasectomy instead of a circumcision. He alleged no negligence in the operation.

Defendant claimed the gist of the action, that of an unauthorized operation, lay in assault and battery. The court held the action was one in malpractice. The malpractice consisted not in lack of skill, but in the degree of care defendant owed plaintiff.[19]

Damages

In cases where a physician negligently sterilizes a person during an operation, many courts, while awarding the usual damages, have refused to allow additional damages for the resulting inability to have children. These damages are considered too remote.[20]

In an 1857 English case a double ovariotomy was performed upon plaintiff, a single woman engaged to be married, against her express instructions. She broke her engagement upon learning she would be incapable of reproducing, and sued the doctor. The court practically instructed the jury to bring in a verdict for defendant.[21]

It is not inconceivable, however, that courts may be influenced by modern sterilty and fertility tests and in the future allow damages for inability to produce

children to one or both spouses in a marriage.

Other fields

A woman had been sterilized prior to marriage. She concealed the fact from her husband. The court held he was entitled to an annulment based upon fraud. The interest in procreation is a true marital interest.[22]

In *Wiley* v. *Wiley*,[23] the husband was sterilized before marriage at the wife's request. After marriage she refused to have intercourse with him. The husband was entitled to an annulment based on fraud. His inability to procreate was due to his wife's desire, with her knowledge, and at her request. She was not deceived prior to marriage.

Eugenic sterilization

Twenty-nine states have eugenic sterilization statutes. They provide for sterilization of persons committed to state institutions who are afflicted with certain mental diseases which may be transmitted to descendants, and certain criminals who, for example, are perverted or show marked departure from normal mentality. These statutes protect persons acting under them from civil or criminal liability. They have been held constitutional.

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CORRELATION CONFERENCE

Miami, Florida

Conferences are presented weekly at Jackson Memorial Hospital by the faculty of the University of Miami School of Medicine.

DR. SHOREY: Our conference today is somewhat different than usual in that instead of presenting a case we will base our discussion on a small disaster which occurred recently and which resulted in twenty patients being admitted simultaneously to this hospital. In addition to the patients admitted, one woman and one dog were found to be dead on arrival at the hospital. All of these individuals had been poisoned with methyl bromide gas.

All but two of the affected persons were inhabitants of a building physically in contact with a second building which was being fumigated by covering it with a

PANEL

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large tent and then introducing the toxic gas. The fumigation process was started on Saturday morning, and by about sunrise the next morning patients began arriving at the hospital. Two police officers who were assisting in evacuating victims were exposed and admitted as patients. Five patients were children.

Symptoms

Symptoms manifested by these individuals can be summarized briefly as follows. Nearly all of them had headache, lightheadedness, and burning of the eyes. Many had dryness of the throat. Three had nausea and vomiting. A few complained of shortness of breath, and of these, two had x-ray evidence of mild pulmonary edema while rales were heard at the lung bases in two others. A few had minor neurological manifestations, but one women was semi-comatose on admission, and soon after arrival she had a Jacksonian convulsion. This same individual was oliguric for eighteen hours. After regaining consciousness, she had a severe intention tremor and was totally unable to use her upper extremities in an organized fashion. She has improved greatly, but she still has difficulty in handling a knife and fork. I might add that an electroencephalogram taken on this patient was normal.

Blood bromide determinations were obtained, and only two patients had a significant concentration, each of which was slight (20 to 30 milligrams percent).

Four of the adult patients had abnormal electrocardiograms. The changes in two of these appeared to antedate the exposure to methyl bromide. However, tracings on the other two patients demonstrated progression and reversion of ST-T wave changes suggesting the presence of a myocarditis.

Other laboratory studies including blood counts, urinalyses, carbon dioxide combining power, serum chlorides, and tests on spinal fluid were essentially negative except for a significant proteinuria in one child.

Pathology

Doctor Davis, who is Medical Examiner for Dade County, was intimately involved in this situation, and he performed autopsies on the woman and the dog. I will now turn the microphone over to him to give us the findings of these postmortem examinations.

DR. DAVIS: The pathological findings made at our examinations of the woman and the dog

were essentially those of pulmonary edema, and these are the usual ones found in cases of acute poisoning by methyl bromide. In addition, we found evidence of tracheobronchitis in the woman. While a tracheobronchitis may be the result of methyl bromide poisoning, I believe that in this instance the inflammatory reaction of her tracheobronchial tree antedated her exposure to the poison.

I say this having the knowledge that she was confined to her room with a respiratory infection on the day that the fumigation was carried out. Therefore, we feel that the tracheobronchitis contributed to her death by being the cause of a heavy exposure to methyl bromide, but I doubt if it was a part of the pathological picture resulting from the poisoning per se.

Actually, pulmonary edema was the only significant gross finding we made, and nothing of interest was found in the other organs of the body. Gross autopsy findings, of course, do not reflect the fundamental lesions produced by methyl bromide poisoning.

DR. SHOREY: Can you tell us what methyl bromide does to the human body?

Metabolism

DR. DAVIS: It affects certain metabolic functions, but just how this takes place is not well understood. The literature contains articles indicating that methyl bromide was causing trouble as far back as the 1880's. Early articles suggested that methyl bromide is split in the body to form wood alcohol and free bromide. However, subsequent investigation has demonstrated that it is impossible to detect wood alcohol in poisoned individuals. Furthermore, significant concentrations of the bromide ion are not found in most cases.

The basic difficulty appears to be that the methyl bromide itself ties up certain chemical groups and in this way interferes with enzymatic processes. The final chapter on the effects of methyl bromide on metabolism is yet to be written.

DR. LAWSON: What about the renal lesion? The only child who had any symptoms at all was the daughter of the woman who died. This girl was quite groggy and out of contact on admission and was ataxic for about 24 hours.

She had as much as 600 milligrams percent of protein in her urine at first, but this gradually cleared over a 10-day period.

Also it was stated that one of the adult patients was oliguric.

Can you explain these indications of kidney involvement?

DR. DAVIS: I am not familiar with the effects of methyl bromide on the kidney. The kidneys of the woman we autopsied did not reveal any gross lesion. We may learn something from the microscopic sections.

DR. SHOREY: Dr. Jones, do you have anything to add in regard to the toxic effects of methyl bromide?

DR. JONES: For an agent which is so widely used and is such a potential source of danger to the public, the pathogenesis of the phenomena which it produces is very poorly defined. Interesting concepts about its action have been advanced, but these are more theoretical than factual. Dr. Davis has already mentioned the concept of methyl bromide splitting up into methyl alcohol and bromide ion and stated the objections to this.

One theory takes into account a property of methyl bromide which makes this material an excellent fumigant, that is its tremendous ability to penetrate almost anything. This includes the cell wall. According to this unsupported theory, methyl bromide carries the bromide ion into the cell where it is never allowed to be normally. Bromine might then be released by hydrolysis within the cell, acting there as a toxic agent. This process of hydrolysis might also liberate free methyl groups, and if these were oxidized they would proceed through the usual degradation ending up as formic acid.

Research

Another possibility in pathogenesis has not been adequately explored, but is suggested by the biochemical literature describing in vitro systems in which methyl bromide is used as an agent to knock out DPN linked reactions. Methyl bromide has the ability to add to some free amino groups, particularly to the amino groups in ring structure. If it were to add to the ring nitrogen of the nicotinic acid co-enzymes, converting the tertiary nitrogen to a quaternary nitrogen, co-enzyme one and co-enzyme two would be inactivated. This theory looks beautiful, and it is amazing that no solid work has been done to further elucidate it.

The clinical manifestations are suggestive in some respects of what one might see in acute deprivation of nicotinic acid co-enzymes. They are remarkably parallel to those produced by the very potent nicotinic acid antagonists which have been de-

veloped as cancer chemotherapeutic agents. The most potent nicotinic acid antagonist used in cancer chemotherapy produces in experimental animals the neurological picture of ataxia and convulsions. These animals may suddenly die, and this sudden death is associated with pulmonary edema.

There may be a clue in this unrelated research to direct us toward the pathogenesis of methyl bromide poisoning.

DR. SHOREY: I believe there is one thing that we can say for sure. Testing of the blood for bromide is no way to diagnose methyl bromide toxicity.

DR. JONES: I agree it is not. On the other hand, if elevated blood bromide levels are obtained by the test of sodium bromide in individuals exposed to methyl bromide, it indicates that they have had a very heavy exposure. I believe the test is of value from that respect.

DR. SHOREY: Dr. Davis, can you give us further information as to how this accident took place. What was the arrangement of the involved buildings?

Penetrating

DR. DAVIS: The walls of these buildings were physically in contact with each other. One building was built in 1938, and its wall was right on the property line. Later the other building was constructed snug against it. Thus, generally speaking, two layers of concrete blocks separated the two.

However, at one place where a lavatory window had existed in the first building only the concrete wall of the second building separated them.

Furthermore, the layer of concrete blocks at the top of the opening left by this old window were laid in such manner that the holes within the blocks made a direct communication between the two buildings. As you may or may not know, concrete blocks are usually laid so that the holes within them go up and down. However, blocks forming the top layer are frequently laid on their sides to prevent concrete from running down inside the wall.

The methyl bromide gas went from one building to the other by way of this old window. The direct communication through the holes in the concrete blocks was one factor, and another is that one layer of concrete blocks is insufficient to contain methyl bromide. As Dr. Jones has already pointed out, this material is highly penetrating, and it can diffuse through the porosity of concrete.

DR. SHOREY: Dr. Jones will you comment on the therapy of methyl bromide poisoning?

DR. JONES: The first procedure in management is, of course, to get the patient out of the methyl bromide atmosphere. One should bear in mind that in addition to the possibility of immediate death as occurred in one of these individuals, experience indicates that delayed toxicity may occur. Individuals, who appear quite well soon after exposure, may suddenly die 36 to 48 hours after exposure. Pulmonary edema is the usual cause, and this has been said to result from chemical irritation of the lungs. However, there is no evidence to support this, and it certainly could be explained just as well by an acute cardiac arrhythmia or some other acute change in the heart.

Furthermore, two of these patients manifested electrocardiographic evidence of something abnormal occurring within the myocardium. The plan of management, therefore, must take into account the possibility of this delayed complication.

Specific details of treatment must be determined by the condition of each individual patient. Marked vomiting, of course, requires attention to fluids and electrolytes. Recurrent convulsions are handled with the cautious use of sedatives bearing in mind that the patient is already in a depressed state. A general anesthetic is occasionally required to control convulsions. If pulmonary edema occurs, the usual procedures are instituted to control it.

Treatment

The most urgent requirement in managing these patients is hour to hour observation for the development of any untoward reaction.

DR. LAWSON: I thought these patients were given BAL.* Is this indicated?

DR. JONES: An editorial appeared in one of the British medical journals which stated that BAL has been reported as being of value in the treatment of methyl bromide poisoning. However, we have not been able to come up with any definite information to support this statement. Do you have any information in regard to this, Dr. Gates?

DR. GATES: No, I have no further knowledge on the use of BAL. However, there are two other items in treatment which, while minor, I believe should be

*BAL or British Anti-Lewisite is an anti-arsenical compound.

mentioned. The first is actually a matter of preventive therapy, namely the police officers who were admitted as patients should have worn gas masks when they entered the building to assist the victims. The second is the prompt removal of clothes of individuals exposed to methyl bromide. I understand that sufficient gas is absorbed in a victim's clothing that if his clothes are not promptly removed, further absorption of gas into the body will occur. Our house staff was very prompt in carrying out this specific procedure.

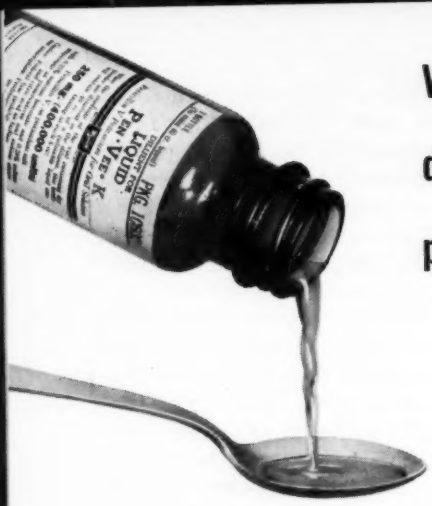
DR. LAWSON: I would like to ask Dr. Jones his opinion of using intravenous sodium chloride in these patients for the purpose of displacing bromide ion with chloride ion.

DR. JONES: Therapy with intravenous saline solution had already been started when I arrived on the ward. I stopped this treatment because I did not feel it was indicated, and I feared it might do harm. While displacement of bromide ion by chloride ion is of value in treating inorganic bromide poisoning, these patients had no significant amount of bromide ion in the extracellular fluid. Furthermore, the principal threat to life in these patients was the development of pulmonary edema, and in some instances oliguria was present. Under these circumstances I believe it is incorrect to introduce salt into the body.

DR. LAWSON: I believe this situation points up a general principle which is worthy of emphasis. In any emergency one should not feel compelled to do something just to satisfy the desire to help a victim. If no definite indication for carrying out a procedure is present, it is better to wait a little while and find out exactly what should be done. Any procedure carried out should have good evidence for its use. Not infrequently a therapeutic measure administered because it might do some good and probably will do no harm actually does do harm.

DR. SHOREY: Do you have any comments in regard to therapy, Dr. Davis?

DR. DAVIS: Since this accident occurred, I have done a little reading on the matter. My only comment is in regard to the use of BAL. I believe the only evidence favoring its use in this situation rests on a study in which mice were exposed to methyl bromide and then treated with BAL. The BAL-treated mice appeared to do better than the non-treated animals. Actually, I do not think



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that treatment with BAL is a good idea. The major complaint of our police officers, who were so treated, was that they could not sit down. BAL also gives other unpleasant side effects.

DR. JONES: I agree with Dr. Davis. We were confused in attempting to evaluate on a clinical basis the degree of each patient's exposure to methyl bromide because of similarity between side effects of BAL and symptoms of methyl bromide poisoning. This was particularly true as regards headache. Another factor which caused difficulty in evaluating symptoms was the fact that many of these people had attended a rather prolonged party on that particular Saturday night. Headaches and conjunctival injection had still another etiological possibility.

Management

DR. SHOREY: If there are no further comments on this particular accident, I believe it would be appropriate to get into a discussion regarding principles in managing disasters in general. This topic is too broad to attempt coverage of all of the various disasters which might occur. The major possibilities in this area include hurricanes, floods, fire, and a plane crash in the middle of the city. With a SAC base immediately south of us and a major airport within the city limits we are a potential target for a nuclear weapon. In other parts of the country, tornadoes have caused major disasters. In 1953, within a brief period of time, tornadoes hit Waco, Texas; Flint, Michigan; and Worcester, Massachusetts. These specific incidents have received considerable attention in the literature, and lessons in disaster management have been learned from them.

Taking care of large numbers of individuals all suffering at the same time certainly is a different situation than taking care of an individual patient who may have injured himself. In order to care for large numbers of casualties, a high degree of organization must be achieved. To obtain such organization, one must have plans ahead of time predicting and anticipating such occurrences.

Disaster plan

Dr. Gates, will you open this phase of our discussion by telling us about existing plans for disaster in this hospital?

DR. GATES: To begin with, any accredited hospital is required to have a plan for the reception and care of mass casualties. In most

hospitals, the number one plan is the fire plan. I feel that this hospital has a very excellent plan for fire which is in the hands of the City Fire Department and also at each nursing station. This is one plan on which we have dry runs. Unfortunately due to the pressure of day to day affairs, other disaster plans are only on paper and are not rehearsed with any regularity.

We have a disaster plan which has been prepared primarily from the point of view of being ready for a hurricane. It also takes into consideration other possible disasters, such as Dr. Shorey mentioned, but I have been concerned that it does not point these up sufficiently.

It is a very simple plan which among other things requires that each chief of service assign a representative who will direct the activities of that service during the emergency. With the advent of the medical school, the Associate Dean and the Deputy Director of the Hospital coordinate the activities of the various services. The Associate Dean is also responsible for making use of medical students as he sees fit.

Other portions of the plan direct how space within the hospital will be used, provide for sending certain patients home in order to provide space for casualties, and give directions for providing protection from flying objects.

One of our major concerns is the care of the pregnant women of the community during and immediately after a hurricane. As part of our plan, any woman more than seven months pregnant may be housed within the hospital upon recommendation of her physician.

We also provide for housing the dependents of our staff who are within the hospital during a hurricane.

DR. SHOREY: In making provision for a hurricane, we have the advantage of a warning system which gives us time to get ready for it. On the other hand, many disasters, for instance the Worcester tornado which caused 100 deaths and 1500 injuries, hit without warning. Is it possible to plan for disasters such as this, Dr. Gates?

DR. GATES: I think it is possible to plan, but sometimes plans go astray. One of the criticisms of the Worcester disaster is that all of the victims arrived at one hospital creating such a traffic problem that people could get neither in nor out of the hospital. We hope to overcome such a problem as this by the presence

of radio communication in the hospital police station. By this radio communication, the police will route casualties to areas that can take care of them.

DR. SHOREY: Does the Jackson Hospital have an emergency water supply?

DR. GATES: Unfortunately, we do not. Our plan calls for filling all bath tubs and certain reservoirs if we have warning. Arrangements have been made with the Miami City Water Department for furnishing water if any is available. In regard to electricity, we are fortunate enough to have diesel powered electric generators which in an emergency can supply essential needs.

MEND program

DR. SHOREY: Another aspect of disaster planning is of concern to us, and in this instance we are thinking primarily of the results of an enemy bombing attack on this area. What happens to our medical school if it is partially destroyed? Of course, if we are completely wiped out there is no problem, but if we should be only crippled what plans are in effect for making use of surviving medical school personnel and for the continuation of medical education, Dr. Marsh?

DR. MARSH: I am sorry to say that many places in the United States, in fact most of them, have taken the complacent attitude that nothing is going to happen so why make any particular plans for this type of emergency. On the other hand, over the past several years plans have been developing for the meeting of such an emergency.

For as long as ten years, the Armed Services have attempted to interest medical schools in developing programs for indoctrinating students in the handling of mass casualties and meeting emergency situations. Little was accomplished until about four years ago when, through the auspices of all the Armed Services and the Public Health Service, a program evolved which had structure and also held out incentive to the medical schools to do something about the problem. Fifteen of the medical schools in this country entered into this program, which is known as the MEND Program or Medical Education for National Defense, during its first two years. Subsequently, each year since its founding, ten new schools have been added to the program, and this next year our own medical school becomes a part of this effort.

The sponsoring services pro-

vide funds which assist the medical schools in carrying out the program, and a national coordinator directs the effort in an organized fashion. However, there is no set formula that a medical school must follow, each school developing its own program along the lines best suited to it.

Each school has its MEND coordinator who takes upon himself the responsibility of introducing into his school methods of transmitting to the students an attitude toward and the techniques of handling mass casualty situations. Dr. Lloyd Newhouser, who is Director of the Blood Bank and who has had a great deal of experience in this type of activity, has been appointed as our MEND coordinator.

Drill

Schools already in the MEND Program have developed various means of getting across the concepts desired. One of the more interesting programs is that at Baylor University where there is a very close liaison with Civil Defense. A simulated disaster was staged in which an explosion and fire occurred in the town of Beaumont, some ninety miles away. The medical students from Baylor transported their equipment to Beaumont to handle the large number of simulated casualties. This demonstration involved tremendous activity in stockpiling medical and surgical supplies and in coordinating personnel to get the job accomplished efficiently. This was carried out as a joint effort between Civil Defense and the MEND Program.

Another aspect of our planning, already mentioned by Dr. Shorey, is that of continuing medical education in the face of disaster. We can anticipate that a bombing attack would kill a certain percentage of our physicians making it even more urgent that our medical students continue with their training. To accomplish this, two lines of planning must be considered. If sufficient faculty and students survive, it may be possible to establish facilities in this area itself outside the so-called ground zero. On the other hand, there might be such widespread destruction that nothing could be continued in this area.

In consequence, this means provision must be made in other medical schools so that our surviving students and faculty members can be sent to those schools to pick up and continue the medical education process. In addition, we must make provision in our own school for possible ex-

pansion and assimilation of personnel from some other medical school that might be destroyed. Now this sounds very good. Actually, we have done nothing definitive about it and few medical schools have. It is something to which we must direct our attention.

Trauma

DR. SHOREY: Much of our discussion on the broad aspects of disaster planning has pointed out the problems that exist rather than producing satisfying solutions to them. The opening discussion centered about an emergency primarily medical in nature. I am sure it is obvious that the immediate clinical problems resulting from most of the disasters which have been mentioned would be surgical rather than medical in nature. Dr. Kurzweg, will you comment upon the handling of mass trauma?

DR. KURZWEG: While it is true that in a mass casualty situation the majority of lesions will be those ordinarily managed by a surgeon, the number of patients will be such that insufficient surgeons will be available to handle each as is desirable in ordinary practice.

Every attempt would have to be made to increase personnel, making use of all attending staff, house staff, medical students, nurses, and technicians. In order to make efficient use of the personnel available, it would be divided into teams with a person of experience directing individuals with less experience. Certain teams would be in the operating rooms while others would be on what is equivalent to hospital wards and in the emergency room.

One team would be made up of the more expert personnel and would have the job of seeing and sorting all victims brought to the hospital. In a situation where more casualties are present than the existing personnel and facilities can accommodate, one of the most important functions is that of sorting of patients and deciding which should be treated and which are beyond help. Limited supplies of blood, plasma expanders, and other supplies should not be used on individuals who have no chance of surviving when they can be used to save less severely injured persons.

DR. SHOREY: Does anyone have other comments in this regard?

DR. GATES: I believe we should take note that a national policy has changed from what it was in the past. The old adage was "save the women and children first."

However, skilled personnel now are considered a premium because by saving them first additional people will be saved.

The matter of identification of victims, although appearing trivial, is very important. Public relations, the control of mass hysteria, and efficient handling of individuals are greatly enhanced by knowing who the victims are and the condition they are in.

I would stress adequate communications in any disaster plan. One should not depend upon a single channel for communications as the one relied upon may not work.

DR. LAWSON: If we had to expand our hospital, just where would the beds come from?

DR. GATES: Our disaster plan calls for taking over the nursing home as a hospital facility.

DR. LAWSON: I mean where would the beds themselves come from? Is there a stockpile of them along with other material?

DR. GATES: Actually, of course, we have the beds that are in the nurses' rooms. We do have 80 additional beds that are stockpiled in this hospital. In addition, this hospital has given Civil Defense some 200 beds that have been moved to their central area.

DR. SHOREY: There are many other aspects of this subject which have not been discussed, but I am afraid our time is up.

Four Men

Company founders (clockwise, starting at top): Ayerst, McPherson, Harrison and McKenna.

——of AYERST

MEN WHO MADE THE MEDICINE

Canadian sports pages in the 1890s often featured the exploits of William Allen Stanley Ayerst, whose speed was in inverse proportion to the length of his name. He was a bicycle racer, a top competitor who in '95 set a record for the 25-mile distance.

But it was in a field far removed from sports—the pharmaceutical industry—that the wiry young man would gain a lasting reputation.

He was born in Kingston, Ontario, August 17, 1875, the son of Mary A. and Alfred Ayerst. His father was a venturesome man who built the first pulp and paper mill in East Angus, Province of Quebec.

Young Ayerst was educated at Cookshire Academy, Cookshire Business School and the Montreal College of Pharmacy. Shortly after getting his degree, he began to make a name for himself as a bicycle racer. At the same time he represented a sporting goods company in western Canada.

While still in his early twenties, Ayerst decided to return to the pharmaceutical field, taking a job in Chapman's Drug Store in Montreal. Here he met Frank W. Horner, a fellow clerk, with whom he became good friends.

In the course of business the two clerks got acquainted with Charles Frosst, a representative for Wampole, a drug house. These three men and John Howie, a Canadian Wyeth chemist, formed the first all-Canadian organization in the pharmaceutical industry.

New company

Charles E. Frosst and Co. was founded in November, 1899, with

Frosst as its president, Horner as secretary, and Howie as head chemist. Ayerst, at the age of 25, joined the company in 1900 when it was incorporated. He was named vice president.

Horner's connection with the firm didn't last long, as he soon quit to join Wyeth. (In 1903 he left Wyeth to form his own company in Montreal.)

Frosst's prospered and expanded. Other executives—men destined to become prominent in the industry—were hired as the need arose.

In 1902 an ex-school teacher named Hugh McPherson was brought into supervise the manufacturing laboratories. He was a graduate of the Ontario College of Pharmacy, where he had won a gold medal for chemistry, and a former employee of the Lyman Knox Company.

Four years later, when the company decided to extend its distribution into western Canada, it hired William J. McKenna to manage this vast territory. A native of Coaticook, Province of Quebec, he had graduated from pharmacy college in Montreal and also completed his apprenticeship in that city.

A warm and enthusiastic man, McKenna, though only 21, showed real leadership abilities. The company made a unique arrangement with him, whereby he got 20 percent of all sales in his territory, and hired and fired his own men.

Four men

William Harrison arrived on the scene in 1916, becoming Frosst's sales manager in Toronto. He was a graduate of the Ontario College of Pharmacy, a member of the class of 1906, which was said to have made a pact on graduation that no man would accept a job for less than $15 a week. How many lived up to their promise was never determined, but Harrison once admitted that he worked for three years for a pharmacist in Napanee, a small town in Ontario, at a wage of $13 a week.

Later he accepted a manager's job for the Gordon Mitchell Stores and was sent to Winnipeg. He remained there five years, until the stores were sold. He then joined Frosst's.

A close business and social relationship existed among Ayerst, McKenna, Harrison and McPherson. Over an occasional beer or at lunch their conversation inevitably turned to pharmacy and their objectives in the manufacturing end of the industry. All agreed that most pharmaceutical

The Montreal Daily Si

VOL. LIX. No. 275 MONTREAL, THURSDAY, DECEMBER 1, 1927

CRAIG STREET FIRE DAMAGES REPORTED TO BE OVER $500,000

Contents of Chemical Building Destroyed—Blaze Breaks Out at 1 o'clock—Two Alarms Necessary — Heavy Loss on Structure—Unknown Origin

Started In Cellar And Spread Throughout Building Despite Firemen

EARLY MORNING FIRE CAUSES HEAVY DAMAGE

SIMP CO CALL

Prominen Views.

WATCH

Great In ship Fr

A fire in the Ayerst plant was front page news in 1927. Though hit by heavy losses, the company moved to temporary quarters and kept production rolling.

houses, and Frosst's in particular, were concentrating too heavily on elixirs and cough remedies, and that there was a great deal more to be offered to the medical profession in the area of biologicals.

Talent pool

In time these discussions led to a decision. In the fall of 1924 (at the tail end of a depression), the four men pooled their savings and borrowed additional capital to start their own business. Their chief asset was their experience at Frosst's: Ayerst had been vice president for 24 years; McKenna, western sales manager for 18 years; Harrison, Ontario sales manager for 11 years, and McPherson, laboratory supervisor for 22 years.

In January, 1925, a charter was granted by the Dominion government. Ayerst, McKenna and Harrison, Ltd. was officially in existence, as announced in a

trade advertisement which promised a "high standard for the Ayerst products."

The same year another associate from Frosst's left that company to become a member of the board of directors of the new firm. He was William Wallace, who had been hired in 1920 by Harrison to represent Frosst's in Toronto. His background included a degree from the Ontario College of Pharmacy, retail drug experience, and five years as a salesman.

Ayerst, with his long experience as an administrator, was president of the new company. McKenna, as sales manager, spent long hours in the field; he also trained salesmen, created promotional material and made contacts for the firm.

Harrison managed sales in Ontario from his office in Toronto. McPherson was secretary-treasurer, production manager and purchasing agent. This triple-threat Scotsman was noted for his uncanny insight into production costs. It was said he could make mental estimates which generally proved correct to within a few cents of actual costs.

Company policy, which continues to be followed today, was stated by the founders: " . . . to carry on research; to produce pharmaceuticals and biologicals . . . to control scientifically the various steps in manufacture, and to market . . . products ethically, that is, through the medical profession rather than directly to the public . . . "

The offices, research and manufacturing facilities and warehouse of the company were located at 22-24 Craig Street, Montreal. The first product offered was cascara, which was soon followed by ferrous carbonate capsules, and a dietary supplement with a cod liver oil base.

Finances

The initial order was received in February and the first products bearing the Ayerst label were shipped in March, 1925.

As might be expected, the concern had financial troubles during the early months of operation. On one occasion, according to a story told by Ayerst, he was forced to see a banker because of an overdraft. The banker flatly refused further credit, whereupon Ayerst threw the keys of 22-24 Craig to him and said, "Here, you run the damn business!"

The banker apparently reconsidered, for Ayerst, McKenna and Harrison, Ltd. remained in the hands of its founders. Their hard work and long hours, plus

Chapman's Drugstore in the 1890s: Old photo shows Frank Horner (left), Ayerst and a young friend. The two clerks quit store to help launch a new drug company.

the help of devoted employees, pulled the company out of the red.

Research in biologicals was the next step in the company's development. McKenna, who was instrumental in getting the research laboratories started in 1925, bought the first litter of white rats (descendants of which are still collaborating with Ayerst scientists). Tests were begun, and thus was established the first commercially operated biological laboratory in Canada.

Recipe

One of the first jobs tackled by Ayerst scientists was the production of an improved cod liver oil. Medical journals were recommending the use of the oil for babies, but much of it then available to consumers was of varying quality. In order to achieve a biologically tested and standardized product, specifications had to be set up by the company itself; official standards were not yet in existence.

With the new product a reality,

promotion was needed. McKenna came up with a cod liver oil mayonnaise, a special recipe to make the oil palatable. As issued to physicians in the form of a prescription, the recipe (the result of many experimental batches) read as follows:

"Take the yolks of two new laid eggs and one teaspoonful of fresh lemon juice. Beat thoroughly and add gradually Ayerst Cod Liver Oil, beating continuously until one pint of the oil is used. Season with about one-third of a teaspoonful of salt and finally add two tablespoonfuls of boiling water to the dressing, mixing thoroughly. Set aside in a cool place and keep closed."

The recipe was apparently a success, for it was widely used—indeed a strange way to sell pharmaceuticals.

Fire

The company's progress received a setback in the winter of 1927. Around 1 A.M., December 1, a fire started in the cellar, leaped to the ground floor, and quickly spread to the upper floor of the 22-24 Craig Street building.

The fire was under control by 6 A.M., too late to save the property. It was nearly a total loss, estimated damage amounting to almost $500,000. Fortunately much of the stock had been depleted to fill the November orders, and these had gone out the night before; therefore stock damage was not extensive. This also meant that money was owed the company, which made for available credit.

A salvage operation was started the day following the fire. Files that were not completely charred were water-soaked and damaged. Time was spent smoothing out correspondence and formula cards and literally hanging them out to dry.

New equipment was secured and operation resumed, with offices at 120 St. James Street and laboratories at 91 Lagauchetiere Street West.

The company's quick recovery was announced in an ad in *Drug Merchandising* which appeared January 18, 1928. Under the headline, "AYERST OUT OF THE ROUGH," appeared this timetable:

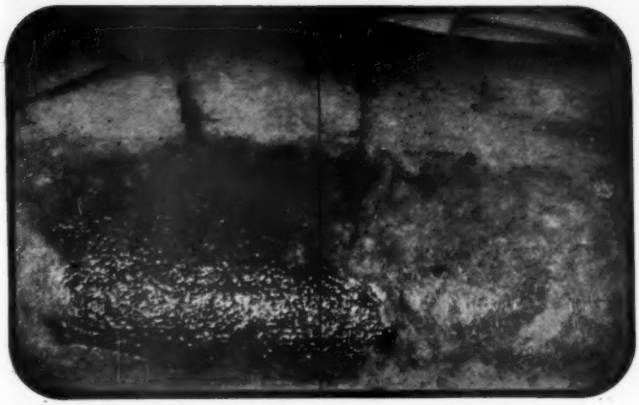
7 a.m., Dec. 1st—Our laboratories completely destroyed by fire.

10 a.m., Dec. 1st—Temporary offices and laboratories rented.

2 p.m., Dec. 1st—Offices equipped and operating.

Dec. 3rd—Commenced installing laboratory equipment.

Dec. 4th—Installation of ma-



Skin graft donor site after 2 weeks' treatment with...

petrolatum gauze—still largely granulation tissue | FURACIN gauze—completely epithelialized

OBJECTIVE EVIDENCE OF SUPERIOR WOUND HEALING

was obtained in a quantitative study of 50 donor sites, each dressed half with FURACIN gauze, half with petrolatum gauze. Use of antibacterial FURACIN Soluble Dressing, with its water-soluble base, resulted in more rapid and complete epithelialization. No tissue maceration occurred in FURACIN-treated areas. There was no sensitization.

Jeffords, J. V., and Hagerty, R. F.: Ann. Surg. *145*:169, 1957

FURACIN®. . . brand of nitrofurazone
the broad-range bactericide that is *gentle to tissues*

spread FURACIN Soluble Dressing: FURACIN 0.2% in water-soluble ointment-like base of polyethylene glycols.

sprinkle FURACIN Soluble Powder: FURACIN 0.2% in powder base of water-soluble polyethylene glycols. Shaker-top vial.

spray FURACIN Solution: FURACIN 0.2% in liquid vehicle of polyethylene glycols 65%, wetting agent 0.3% and water.

EATON LABORATORIES, NORWICH, N.Y.

Nitrofurans—a NEW class of antimicrobials—neither antibiotics nor sulfonamides

chinery and equipment in temporary laboratory completed.

3:43 p.m. Dec. 14th—Turned out first batch of "Calcium A" capsules. Other specialties followed in quick succession.

By Dec. 31st—We had manufactured and shipped 40 percent more merchandise than our total shipments for December, 1926.

"Our representatives are all out on their respective territories," the ad concluded. "Your wholesaler is fully stocked. We are at your service."

Some months later the business and manufacturing operations moved to new quarters at 781 William Street. (The next big move was in 1945 to the present location in Ville St. Laurent, a suburb of Montreal.)

Scientific cooperation

A fruitful association between Ayerst and Dr. John B. Collip was begun in 1930. Newly appointed head of McGill University's department of biochemistry, he was well known for his work on insulin.

(In 1923 Collip's co-worker, Dr. J. J. R Macleod, and Dr. Frederick G. Banting had been awarded a Nobel prize for the discovery of insulin. Macleod gave half of his share of the prize money to Collip.)

Dr. Collip's major interest long had been the investigation of the functioning of glands. In 1924 he discovered that the function of the parathyroid was to control the body's calcium production. Later he shifted to the investigation of the pituitary and thyroid glands.

William McKenna had known the doctor for some years. And when Dr. Collip came to McGill he was offered the aid of Ayerst's facilities in the production of pituitary extracts. He accepted the offer.

Working with students at McGill, Collip made a number of different types of glandular extracts; when one showed up well under tests, it was turned over to Ayerst for ampuling and distribution. This was done through a special arrangement with the university. Some of these extracts were: growth factor, gonadotrophic factor, prolactin and adrenocorticotrophic factor.

Estrogen

In 1930 Collip also discovered the first orally active estrogen. Marketed by Ayerst, it became the subject of controversy; at that time it was believed that estrogen could not be administered orally with any degree of effectiveness.

The estrogen was first produced from an acetone extract of human placenta. Through the help of McGill, the collection of placentas was organized on a national scale. Later, a process was discovered which utilized human late pregnancy urine (third trimester).

The system of collection was organized through contacts with the well baby clinics and through the cooperation of a number of physicians with extensive obstetric practices.

A salesman was assigned the task of making the rounds each week, collecting gallon jars of pregnancy urine, and paying the contributors at the rate of 25 cents a gallon—a good price in 1930-31.

As might be expected, this procedure had its drawbacks. One unfortunate salesman was followed by the police for several days and finally arrested on suspicion of bootlegging. Happily, the guardians of the law saw the light when the salesman explained why he delivered empty bottles and carried out filled ones.

Obviously the source of supply and method of collection were not suitable for large-scale production. Further investigation turned up another source—pregnant mares' urine—and the problem was solved.

Although Ayerst's initial effort in the endocrine field was not highly successful from a commercial standpoint, it brought prestige to the small company and placed it in a position of collaboration with top investigators and clinical men in the field of endocrinology both in Canada and the United States.

In 1930-31 American pharmaceutical journals began to publish reports of steroid studies, and in time requests for estrogenic substances became heavy.

So many orders for pituitary factors, estrogens and other products were being received from the United States that 1934 (another depression year) saw the company's further expansion. A vacant school building at Rouses Point, N. Y., purchased for $500, became headquarters for Ayerst, McKenna & Harrison (U.S.), Ltd.

Rouses Point, because of its proximity to Montreal, was an excellent location. Orders for Ayerst products in the first month of operation in the U.S. totaled 667. (Production for the U.S. company is still located at Rouses Point. The old school building has been remodeled several times and extensive new buildings added.)

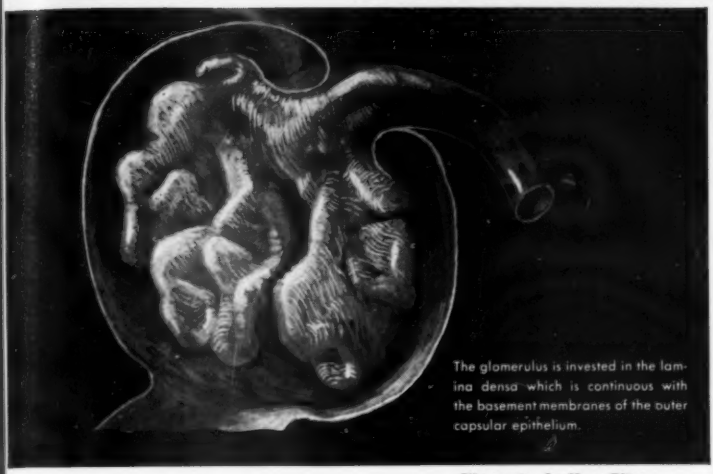


Illustration by Hans Elias

Rolicton® Diuresis Maintains Continuous Edema Control

The efficacy of Rolicton (brand of amisometradine) in maintaining diuresis in the edematous patient has been established on an average dosage of one tablet b.i.d. Larger doses may be given as initial therapy and as maintenance therapy in edema difficult to control. Many patients will respond to one tablet daily.

"The margin of safety and the diuretic index is certainly an improvement over the use of oral mercurial diuretics."[1]

A highly desirable effect, and one which has been made possible with Rolicton, is the maintenance of continuous diuretic effectiveness day after day over an extended period, to avoid the up-and-down weight pattern typical of other edema-control methods.

"There was an obvious stabilization of weight in practically all of the patients under observation, and previous wide fluctuations in poundage disappeared."[2]

Typical of the Rolicton diuresis pattern is the ability of the drug to reduce and, in a large percentage of patients, to eliminate the need for mercurials parenterally.

"... the drug represents a most useful addition to our armamentarium in the treatment of edema, not only because it can be given orally ... but more so because it permits [us] to replace or to spare the ... mercurials."[3]

G. D. Searle & Co., Chicago 80, Ill.
Research in the Service of Medicine.

1. Asher, G.: Personal communication, June 23, 1956.
2. Settel, E.: A Clinical Evaluation of a New Oral Diuretic, Rolicton, Postgrad. Med. 21:186-190 (Feb.) 1957.
3. Goldner, M. G.: Personal communication, June 29, 1956.

SEARLE

To keep pace with the need for added research, the company's laboratories in Canada were relocated in larger quarters on Wellington Street, near the William Street plant.

Sera, vaccines, and antitoxins were also news in the thirties. Ayerst developed a new vaccine for the treatment of pertussis, an improved staphylococcus toxoid, a serum for the treatment of measles, and some 30 antipneumococcal sera. However, the discovery of the sulfonamide drugs signaled a new trend in antibacterial therapy, which halted the further development of more expensive vaccines and sera.

In World War II, Ayerst was one of the first companies to volunteer its services to the Canadian government for the manufacture of penicillin. Responsibility for this important war project was divided between two Canadian firms—Ayerst and Connaught Laboratories.

After successfully guiding the company for 17 years, the four founders — Ayerst, McKenna, Harrison and McPherson — began to think of retirement. This created problems, for none of their children desired to take over management of the business.

In order to secure the future of the company and its personnel, the firm was sold, in 1942, to American Home Products, Inc.

Ayerst, McPherson and McKenna retired, though the last named remained in the capacity of consultant. Harrison stayed on as chairman of the board and general manager of the Canadian Division of the company. In 1945 he stepped down as general manager and three years later relinquished his other title.

Hugh McPherson died in 1954 and Harrison in 1956. Two years later, death came to both McKenna and Ayerst, the latter at the age of 83. These four men had accomplished much during their lives, both as businessmen and community leaders.

In 1953 the U.S. division of the company had its name shortened to Ayerst Laboratories. The Canadian organization retained its original name—Ayerst, McKenna & Harrison, Ltd.

The company has grown considerably since becoming part of American Home Products, developing into a multi-million dollar operation involved in supplying pharmaceuticals to many countries. But one thing has not changed, and that is the company motto which expresses the founders' guiding philosophy:

"Pharmaceuticals through medical research."

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The enthusiasm with which doctors view Blue Shield is apparent. Today approximately 120,000 practicing physicians in areas served by Blue Shield Plans actively participate in the program. Equally important is the public acceptance of Blue Shield. More than 40 million people are now enrolled, and new members continue to join by the thousands.

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What About the Psyche?

There will be times in your practice when the "psychic" aspects of a patient's illness will outweigh the physical components. Question: Will you recognize the fact?

Anthony R. Tortora, M.D.

The practice of medicine in the aggregate is an art in which the teachings of medical science are put to their practical application.

The art of medicine embraces not only diagnostic and therapeutic procedures, but also the avenues of approach used in handling the patient psychologically, i.e., the doctor-patient relationship. The premise will be taken in my presentation that medical men are diagnostically and therapeutically keen, basic tutelage in medical schools being essentially the same. However, this is not true as far as awareness of psychiatric and psychosomatic problems is concerned. Some schools of medicine may not have properly emphasized this particular and essential branch of medicine.

In the past, a large percentage of schools taught "psychiatry," not as an integrated part of medicine, but as a bizarre, vague and mysterious subject concerned with the classification of the insanities. After graduation, the physician continued to associate the psychiatrist and his patients with mental institutions. However, in the past decade, psychiatry has rid itself of social stigma and been divested of the fallacy of humbug, misrepresentation and obscurity.

Psychiatry has gotten away


Dexamyl

from the "mysticism" which once confused and alienated physicians in other branches of medicine. As a result, psychiatry has undergone a complete metamorphosis.

Teaching institutions are now broadening their educational programs in the psychiatric field with full awareness that the handling of psychosomatic problems is an important adjunct in the treatment of disease. Yet, general practitioners have been slow in their acceptance of the importance of psychosomatic problems. Why I do not know. Is it because they feel that psychiatry has shut itself off through the development of a jargon difficult to understand by the untrained? Is it because some are reluctant to practice psycho-biologic medicine because of unfamiliarity with the terminology or animosity toward the terms and concepts?

Treatment

We must remember that man is not merely a chemical factory, but a social person endowed with elastic emotional equipment which plays an integral role in his physiological functioning, and which at times may dominate the whole situation.

There can be no dichotomy between body and mind since the psyche and soma are biologically one. The psyche plays an important symptomatic role. Thus, establishing a proper human relationship with your patient represents an important addition to fundamental medical concepts of treatment. As a result of this relationship, mental disturbances which affect the course of illnesses may be determined and dealt with.

Rapport

During illness, patients may not only be in pain and distress but often are markedly apprehensive regarding the outcome; few individuals exist who can claim an immunity from trepidation and anxiety during sickness. A proper rapport with the patient must be established from the very onset; the patient must be made to feel from the start that his attending physician is interested not only in the condition but also in him, and that his illness is receiving personal study and treatment. The doctor-patient relationship is receiving more attention now as a result of the emphasis placed on psychosomatic medicine.

Sometimes as a defense against their own conflicts, some physicians erect barriers against any thinking on psychosomatic problems, and so any attempt by the

patient to communicate psychosomatic symptoms is turned aside with brusqueness, contempt, boredom or laughter.

Exaggeration

A physician is called to examine a sick person for the primary reason that he remedy the condition which is bothering the patient, and also for the secondary purpose of easing the anxiety and responsibility of the immediate family and friends.

The physician takes the history, examines the patient, makes a tentative diagnosis, and then plans a regimen of treatment. He will then have to inform the family of the situation.

At this point the mode of delivery of the facts of the case is important in lessening the anxiety of family or friends. Salient features of the illness, told simply and concisely, will be worth more than a drawn out dissertation.

It is not unusual for a physician to exaggerate or employ histrionics, either subconsciously or consciously, in relating the facts of a case. In most instances this magnification is used to make certain that medical orders are adhered to, and hence under certain conditions is warranted. Nevertheless, at times this approach is being used to bolster the physician's ego, and to assure the extollment of his own virtues by the patient after recovery.

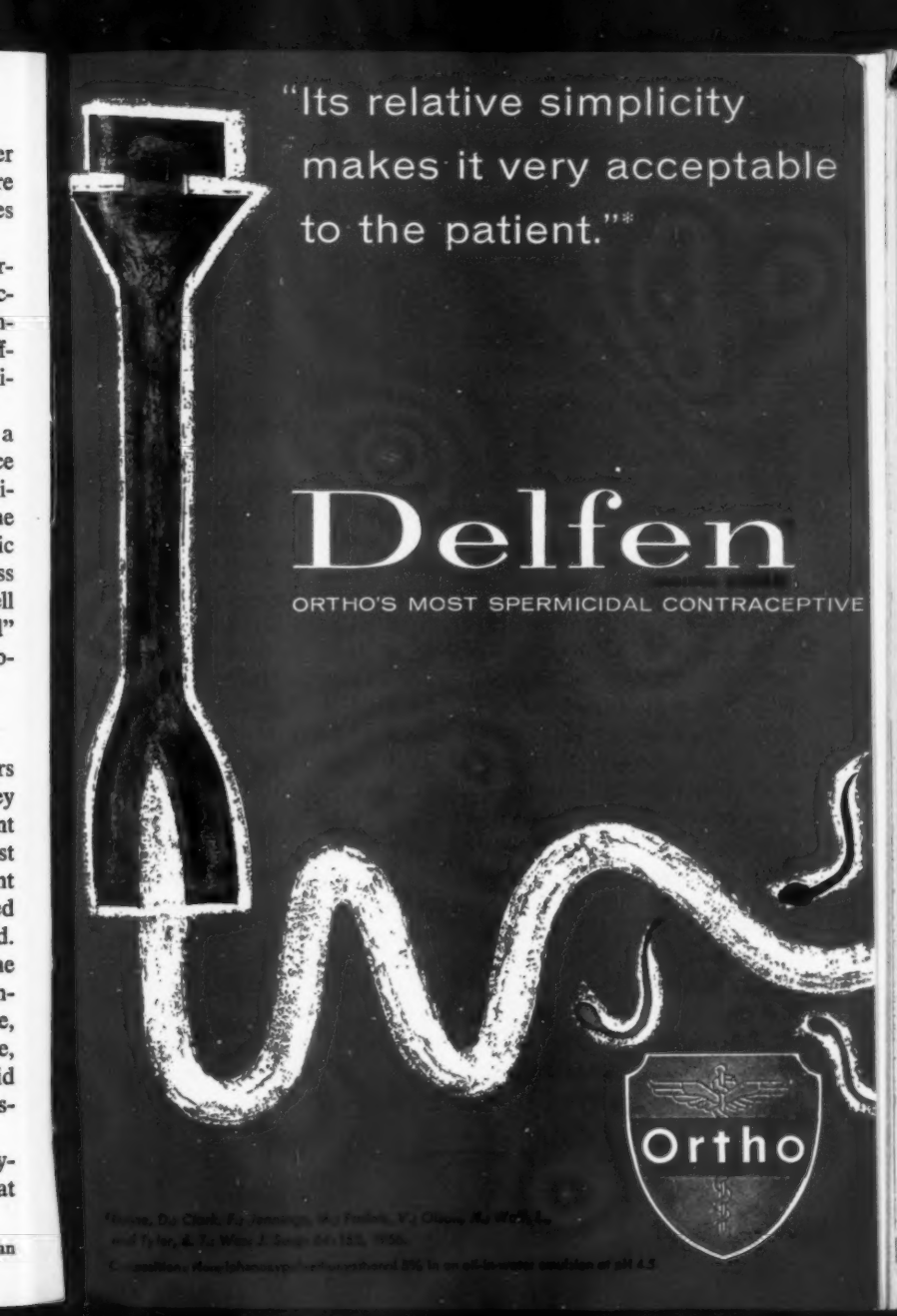
On the other hand, an uncertain or obviously alarmed practitioner will fail to inspire the confidence which is necessary to offset the always present psychological "shock."

If the doctor is to occupy a position of trust and confidence and gain a modicum of omniscience and omnipotence, he should be a kind and sympathetic person with an air of "coolness of perception" about him as well as projecting a "take command" attitude. No one respects a submissive and yielding doctor.

Anxiety

Patients may influence doctors favorably and unfavorably; they achieve this under many different guises. The practitioner most likely to be swayed by his patient is one with a craving to be loved and a fear of not being liked. This yearning places him at the mercy of patients who make unjust demands upon him. Hence, instead of running his practice, his practice runs him. He is afraid to refuse requests for fear of losing patients.

I would be dishonest with myself if I did not mention that


"Its relative simplicity makes it very acceptable to the patient."*
Delfen
ORTHO'S MOST SPERMICIDAL CONTRACEPTIVE
Ortho

medicine has become a "competitive business" and in certain areas of the country a "dog-eat-dog" affair. Perhaps this competitiveness may contribute to the physician's submissiveness.

This type of behavior arises more often from his own anxieties than from the patient's wishes. As a result of this craving, whether being aware of it or not, his attitude is to be yielding, facile, passive, meek, and gentle. The latter to a certain degree is an asset, but it can be overdone.

Remember, the most domineering and demanding patient secretly desires the practitioner to take command; be steadfast and unyielding. The physician who takes into consideration the emotional make-up of his patient; his character structure, his ways of meeting stress, best serves the interests of the greater percentage of his patients. To this end the physician should train himself.

Essential study

The study of psychosomatic disease is essential if we are to link successfully the association of the physical illness to the psychic situation and personality behavior of the individual. Superimposed emotional problems on physical afflictions constitute the primary disturbances of a large segment of the patients seeking medical assistance. These worries of the patient complicate the course of disease, influence its diagnosis and treatment, and the outcome of most ills.

This brief discourse was written for the sole purpose of alerting the young physician to the fact that all humans possess a variable, emotional make-up. If this is kept in mind, he will broaden his effectiveness in relation to his ability to influence his patient. Psychosomatic medicine is part of all branches of medicine. It deals with "insight" into human behavior. It does not imply that we study the soma less, but rather the psyche more. The goal of medicine is to constantly extend the physician's range of usefulness in preserving and restoring physical and mental health.

The art of medicine therefore consists of the use of proper therapeutic measures as well as intelligent psychologic handling. The doctor who gains "insight" into human behavior is well on his way to being a complete physician.

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Homer F. Marsh, Ph.D.

Guest Editorial

A Continuing Obligation

As these comments are being prepared, the more than 80 medical schools of the country, and their affiliated teaching hospitals are witnessing an activity which is common to all. This may be described as the annual migration. Senior medical students are anxiously anticipating their internship periods; interns are either looking ahead to medical practice, or to the beginning of graduate training in the various special fields of their choice; and resident housestaff members who are completing their training will soon turn to practices of their own.

This orderly activity is to be expected and is good but it has its impact on faculties and administrators of the institutions involved. Not only can they pause for reflection on the accomplishments of the past year, but they must turn to the problems incident to the development of improved programs of the coming year. The immediate responsibility for the programs and the resolution of attendant problems lie with the administrators and faculties, yet it is appropriate to remind those who have partaken of the educational and training

"SAFE AND EFFECTIVE MAINTENANCE THERAPY...HAD BEEN A PROBLEM AT OUR INSTITUTION UNTIL WE USED GITALIN [GITALIGIN]..."*

WIDEST SAFETY MARGIN—Average therapeutic dose is only ⅛ the toxic dose.‡

FASTER RATE OF ELIMINATION THAN DIGITOXIN or digitalis leaf.

THESE SIMPLE DOSAGE EQUIVALENTS MAKE IT EASY TO SWITCH YOUR PATIENT TO GITALIGIN—0.5 mg. of Gitaligin is approximately equivalent to 0.1 Gm. digitalis leaf, 0.5 mg. digoxin or 0.1 mg. digitoxin.

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GITALIGIN Injection Ampuls — 2.5 mg. in 5 cc. sterile, I.V. solution.
GITALIGIN Drops — 30 cc. bottle with special calibrated dropper.

*Harris, R., and Del Giacco, R. R.: Am. Heart J. 52:300, 1956.
†White's brand of amorphous gitalin.
‡Bibliography available on request.

Arteriosclerotic Heart Disease

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HOMER F. MARSH
Dean, University of Miami School of Medicine

opportunities offered that they also have a share in this responsibility.

You who have undergone the educational and training programs of today have found these to be more difficult of accomplishment than did those who undertook similar programs of a decade ago. The greater depths and breadth of knowledge to be mastered is almost overwhelming when considered by the individual. The changing picture is even more striking to those whose entire efforts have been devoted to the guidance of young men and women through the educational offerings, for they have had the opportunity to constantly observe the rapidity with which Medicine has grown in complexity. There can be no doubt that the quality and scope of medical education in the United States is the highest to be found in the world, nor as a result of the high level of education that the quality of patient care is the greatest to be found anywhere. This situation has not come about by chance, nor has it developed without creating problems for the educational institutions.

The general character of a medical school and its faculty has changed over the years. No longer is the faculty expected to devote all energies to instruction alone; there has been created a greater and greater demand on them to enhance knowledge and skills through their activities in research. The public of our nation has become sensitized to expecting the answers to all problems concerned with improving health. They have contributed heavily to independently developed and publicly supported voluntary health agencies in many millions of dollars each year, and they have not objected when Federal agencies have been provided with

millions of dollars for the support of research in the health sciences with those dollars coming from the only source available, namely, the public itself through taxes of various kinds.

The faculties of schools in which the major part of research is done have little difficulty in attracting support for research, and this side of the coin is encouraging. There is the other side which must be examined, however, and it is not so bright.

Research cannot be carried on without qualified people, and in medical research there is but one source of qualified people: the medical schools themselves. Nonetheless, true recognition of the needs of these institutions if they are to meet their total obligations have not developed as rapidly as has the recognition of their contributions. It is safe to say that no medical school is free from an annual operations deficit, and there are but a few in which the need for modernized and expanded physical facilities is not in evidence. Somehow, the public, which ultimately supports organized medicine and medical education either directly or indirectly, must be made as completely aware of the fundamental needs of the schools as it has been made aware of the contributions of these institutions in research.

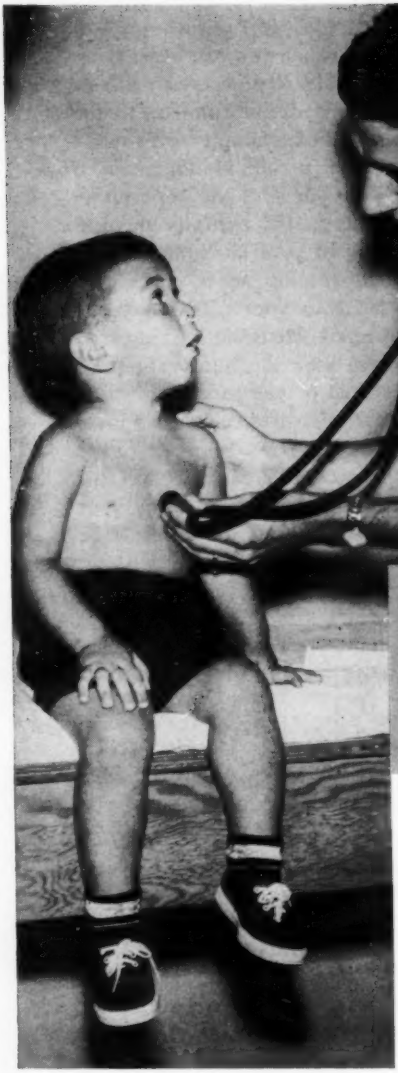
As the annual migration of undergraduate and graduate students of Medicine takes these men and women away from the immediate environs and influences of the medical schools and their hospitals, it will be necessary that such graduates assume greater responsibilities for the future of medical education.

Although your progress through many years of guidance in Medicine has been expensive to you, keep in mind that for each dollar which was invested by you, four additional ones were invested by the institution offering you the opportunity to become physicians.

There are several ways in which you can assist these institutions, as other physicians are now assisting. You will have the opportunity to contribute dollars to the American Medical Education Foundation which already has contributed in excess of a million dollars each year since its founding. You will have the opportunity to influence grateful patients in the needs of medical education, and civic leaders of your communities will respect your judgments as specific needs concerning medical education may arise in your community.

The language of organized Medicine is respected and is heard by those who seek the ministrations of its members; it behooves each of you to keep in mind that the future of Medicine and medical education in this country must concern you.

Without your help, the present predicament of the schools will only increase in magnitude; with your help, the schools can move ahead as they must. The decision is yours to make.



Jackson M

ONE OF A SERIES

ON LEADING

RESIDENT-INTERN CENTERS

Jackson Memorial Hospital

A county hospital affiliated with the University of Miami School of Medicine, this 1000-bed center provides approved training in 16 specialties for a house staff of 240 residents and interns.

Jackson Memorial Hospital was established in Miami, Florida, in 1910 as a city hospital. Since that time it has grown progressively to meet the service requirements of the growing metropolitan area of Greater Miami.

The two most recent developments of the hospital were in 1949 when the hospital was reorganized and transferred from City of Miami to Dade County control, and in 1951 when, by written agreement between the Dade County Commission and Trustees of University of Miami, Jackson Memorial Hospital was made the teaching hospital for the recently organized University of Miami School of Medicine.

The agreement between the County and University briefly states that the County will provide a hospital suitable for care of indigents of the county, provide for the essential teaching facilities for the medical school, and operate this facility providing personnel, equipment and financial support.

The University provides medical care of medical indigents both inpatients and outpatients and in turn utilizes the hospital facilities and patients for teaching and clinical research.

From a small beginning in 1917 at its present site, Jackson Memorial Hospital has grown to approximately 1,000 beds and bassinets, with an additional 400 beds and supporting facilities being added at the present time. As

Main entrance to Jackson Memorial Hospital's central building.

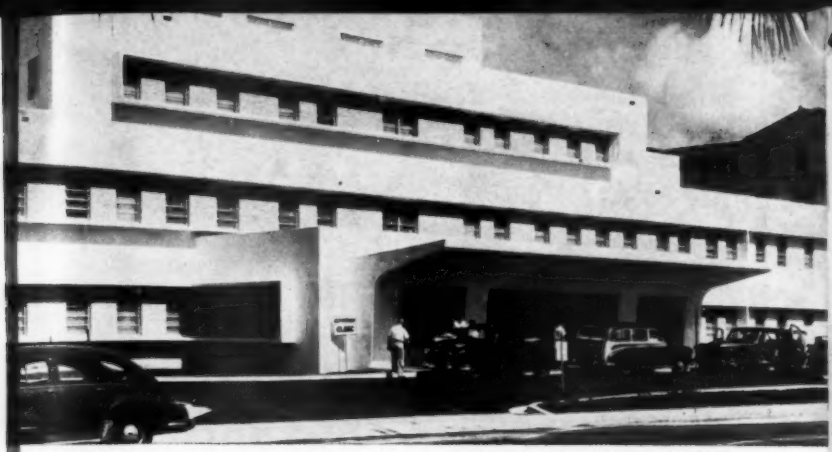
a general hospital all types of services are offered. The general organization, under Executive Director Kermit H. Gates, M.D., includes usual administrative divisions with nine major professional departments — mainly Surgery, Medicine, Pediatrics, Obstetrics - Gynecology, Psychiatry, Pathology, X-ray and Anesthesiology.

Facilities

At the present time Jackson Memorial Hospital has 987 beds and 86 bassinets. These beds are divided as follows: psychiatric service 108 beds, pediatric (including 86 bassinets) 186, obstetrics-gynecology 125. The remainder are divided between medicine and surgery, with the subspecialties having appropriate assignment of beds within the general allotment to medicine and surgery.

Beds within medicine and surgery include isolation beds, tuberculosis beds (short term care only), a general medicine section, cardiology, neurology, dermatology, endocrinology, gastroenterology, and other specialties related to medicine. In surgery the sub-allotments include general surgery, orthopedics, ophthalmology, otolaryngology, neurosurgery, urology, and similar subspecialties within the surgical field.

These beds are divided 40% for private patients and 60% for staff (charity) patients. Approximately 20% of the total number of beds are utilized by colored patients.



Excellent training is offered residents through Jackson's modern outpatient clinic.

Patient beds are contained, along with supporting laboratory and radiological department, physiotherapy, and other facilities, in four main buildings, all connected or merged one into another, mainly Woodard Building, Skaggs Building, Central Building and Colored Hospital Building. The Institute, connected by corridor, contains the psychiatric service; and a separate Chest Building, also connected by corridor, houses 83 beds for medical chest cases.

New construction

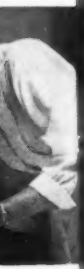
Buildings under construction are as follows:

- An Emergency Service Building which will be capable of handling 350 emergencies per day with 38 observation beds and 25 detention beds for police cases.
- A new patient wing to contain administration, pathological laboratories, 23 surgical recovery beds, 22 intensive treatment beds, 41 pediatric beds, 40 EENT beds and 108 general medical and surgical beds for private patients.
- An additional floor on the Isolation Building to contain 46 beds for care of various types of communicable disease cases.
- Mental Health wing to furnish outpatient space, psychotherapy treatment areas and mental rehabilitation, and 26 beds for night care to supplement day care of the outpatient and rehabilitation areas.

Additional supporting facilities are a morgue with anatomical demonstration areas for the house

FOR PROMPT,* SAFE** CONTROL

OF SPONTANEOUS BLEEDING



"PREMARIN" INTRAVENOUS has been used effectively to control spontaneous bleeding as in epistaxis, post-tonsillectomy and postadenoidectomy hemorrhage, as well as pre- and postoperatively to minimize bleeding after surgery. "PREMARIN" INTRAVENOUS may be used adjunctively with other therapy.

* Bleeding was stopped, in more than 80% of 668 cases reported,[4] with one 20 mg. injection of "PREMARIN" INTRAVENOUS.

**Some 1,000,000 injections of "PREMARIN" INTRAVENOUS have been made to date without a single report of toxicity or production of thrombi.

HOW "PREMARIN" INTRAVENOUS CONTROLS BLEEDING

Studies by Johnson[1,2] reveal that "PREMARIN" INTRAVENOUS controls bleeding through its effect on three important factors in the coagulation mechanisms.

BASIC COAGULATION MECHANISM	EFFECT OF "PREMARIN" INTRAVENOUS
PROTHROMBIN in presence of Calcium ions Thromboplastin	Within 15 minutes, prothrombin concentration is increased.
ACCELERATOR GLOBULIN is converted to **THROMBIN** which activates **FIBRINOGEN** to form **FIBRIN** (clot)	Marked increase in accelerator globulin is noted within 15 to 30 minutes. Also known as "factor V" and "proaccelerin," accelerator globulin has "enormous influence on the velocity of thrombin formation..."[3]
anticoagulation factor **ANTITHROMBIN** (inhibits thrombin)	Simultaneous reduction of antithrombin "increases the amount of potential thrombin available and also tends to make it more effective."[1]

"PREMARIN"® INTRAVENOUS (conjugated estrogens, equine) is supplied in packages containing one "Secule"® providing 20 mg., and one 5 cc. vial sterile diluent with 0.5% phenol U.S.P.

1. Johnson, J. F.: Proc. Soc. Exper. Biol. & Med. 94:92 (Jan.) 1957. 2. Idem: Paper presented at Symposium on Blood, Wayne State Univ., Detroit, Mich., Jan. 18, 1957. 3. Owren, P. A.: Northwest Med. 56:31 (Jan.) 1957. 4. Published and unpublished case reports.

"PREMARIN" INTRAVENOUS

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5903

SURGICAL CONFERENCES

MONDAY

6:30- 8:00	House Staff Rounds
8:00-12:00	Ward Management, Consultations, Attending Surgeon Rounds
12:30- 5:00	Clinic
6:00- 8:00	Professor's Conference
8:00	House Staff Rounds

TUESDAY

6:30- 8:00	House Staff Rounds
8:00- 9:00	Pathology Conference
9:00-11:00	Tumor Clinic
11:00-12:00	Tumor Conference
1:00- 6:00	Staff Surgery
7:00- 9:30	House Staff Rounds

WEDNESDAY

6:30- 8:00	House Staff Rounds
8:00- 6:00	Staff Surgery
7:00- 9:30	House Staff Rounds

THURSDAY

6:30- 8:00	House Staff Rounds
8:00- 9:00	Grand Surgical Rounds
9:00-12:00	Clinic
1:00- 4:00	Ward Management, Consultations, Attending Surgeon Rounds
4:00- 6:00	Chart Conference
6:00- 8:30	House Staff Rounds

FRIDAY

6:30- 8:00	House Staff Rounds
8:00- 4:00	Staff Surgery
4:00- 6:00	Professor's Walking Rounds
7:00- 9:30	House Staff Rounds

SATURDAY

6:30- 8:00	House Staff Rounds
8:00- 9:00	Death Conference
9:00-10:00	Journal Club
10:00-12:00	Attending Rounds
1:00	Ward Management
6:00	House Staff Rounds

SUNDAY

8:00	House Staff Rounds
6:00	House Staff Rounds

staff, addition to Medical Record facilities, an x-ray therapy building to house a cobalt unit, the extension of clinical laboratory and diagnostic x-ray facilities, an extensive automatic pneumatic tube system, and a nurses education building consisting of large air conditioned classrooms.

Housing expands

Student housing facilities are being enlarged by adding five stories on an existing nurses home (Royce Building) for the student nurses, and modernization of an existing nurses home on the hospital grounds for the house staff.

The new house staff quarters will consist of 86 single rooms with connecting or adjacent bath, and air conditioned rooms for reading and music. Game room areas for pool and ping pong will be available on the third floor. Interspersed within the building will be lounging areas. Individual phones will be placed in each room.

The University of Miami School of Medicine is building the first section of a $6 million medical school building adjacent to the outpatient clinic building and the School of Nursing. This section will be eight stories, designed primarily for research activities of the school.

Clinical material

There is an abundance of clinical material at Jackson, which increases yearly. The hospital has a staff outpatient clinic that averages in excess of 500 staff outpatients daily among some forty clinics held weekly.

The emergency service is contained in a separate building where an average of 225 emergencies from the Greater Miami area are seen daily. Ambulance service is furnished from local services outside the hospital and the house staff is not required to make ambulance calls or leave the hospital to treat patients.

The inpatient service has increased each year for the past several years in proportion to the increase of population of Greater Miami area. This number will be increased within the year with the completion of the facilities housing 400 new beds.

During the twelve month period ending April 30, 1958 the average daily inpatient census was 829. There were 35,609 patients discharged and 302,658 patient days. Of these 107,301 were private hospital days, 185,752 staff and 9,605 part pay. All staff and part pay and some private patients are used for teaching.

During the year ending April 30, 1958 a total of 122,782 visits were made to the outpatient clinics and 82,408 treatments were given in the Emergency Department. There were 11,933 surgical operations and 5,668 births. Deaths numbered 1,650 and of these 706 or 42.8% were autopsied.

Laboratory

The hospital has a well organized clinical laboratory and pathology department directed by the Chairman of the Department of Pathology, University of Miami School of Medicine.

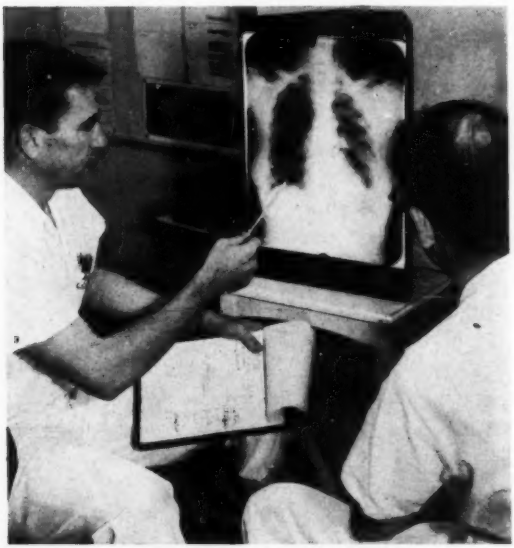
The X-ray Department has complete facilities for all diagnostic and therapeutic procedures including the use of radium and isotopes. This department is supervised by the Chairman of the Department of Radiology, University of Miami School of Medicine. Three full time qualified radiologists are available at all times. All are Diplomates of the American Board of Radiology and all hold teaching appointments in the University of Miami School of Medicine.

Other laboratory services, such as Heart Station for electrocardiography and cardiac catheterization work are available, an electroencephalography, pulmonary function laboratory and many

other special laboratory services are supported. An autoanalyzer made by Technicon has been added to the laboratory. This automatic laboratory assistant is calibrated for use with ureas, calciums, and sugars. Readings are recorded automatically by a photoelectric cell which is sensitive to intensity color changes. For the year ending April 30, 1958 a total of 607,003 clinical laboratory procedures were performed in the clinical laboratory. A total of 15,113 electrocardiograms and 1,721 electroencephalograms were completed.

Ward rounds are made with members of the faculty, attending and resident staffs on the particular service to which assigned. The house staff is expected to present cases and enter into the discussions at the regular weekly clinic meetings and occasionally before the meetings of the general staff. Clinical correlation conferences are held weekly and members of the resident staff are expected to attend and take part unless kept away by official duties.

A typical week of a surgical



Viewbox sessions develop residents' proficiency in x-ray reading.

IF THE URINALYSIS SHOWS INFECTION:

New Pyridium Tri-Sulfa, for acute urinary tract infections, is the only combination treatment which provides the therapeutic dose of analgesic Pyridium with only 1 tablet four times daily. Provides symptom relief in less than 30 minutes plus broad and efficient antibacterial action. **PYRIDIUM® TRI-SULFA**

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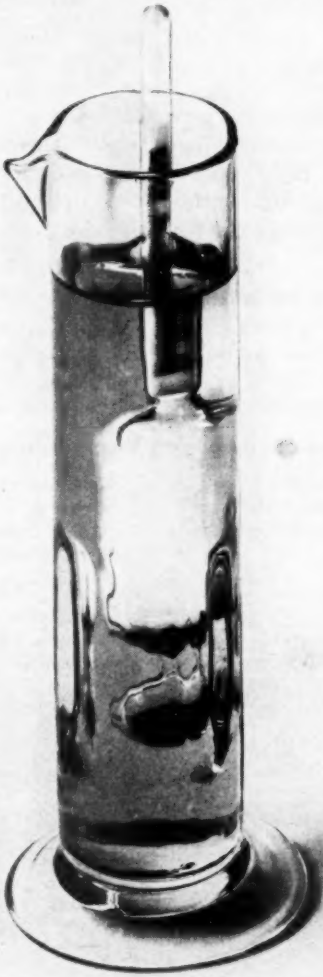
MORRIS PLAINS, N. J.



resident follows. All services have a comparable schedule of training. Special lectures and training opportunities are offered by all services.

Library

The University of Miami School of Medicine has a medical library in the hospital. There are 9,628 books, 12,257 bound journals and approximately 268 pamphlets. Number of periodical subscriptions is 617. The members of the resident and intern staff have full use of the library.

Medical staff

The Medical Staff consists of full time staff, voluntary attending staff, courtesy staff and house staff.

There are 76 full time clinical medical staff members of the University of Miami School of Medicine, with 617 voluntary at-

APPROVED RESIDENCIES

The following residencies are approved at Jackson Memorial Hospital. All are supervised by the Chairmen of the various professional departments of the School of Medicine, University of Miami, who are also chiefs of the respective services of the hospital.

APPROVED RESIDENCIES	CHIEF OF SERVICE	NUMBER RESIDENTS
MEDICINE. General,	Ralph Jones, Jr.	34
Cardiovascular Diseases	Robert J. Boucek	6
Dermatology & Syphilology	Harvey Blank	8
Neurology	Peritz Scheinberg	8
SURGERY. General	John J. Farrell	26
Urology	George Prout	6
Otolaryngology	J. R. Chandler	2
Orthopedic Surgery	Wallace Miller	6
Anesthesiology	J. Gerard Converse	6
Ophthalmology	Edward Norton	6
Oral Surgery	Thomas J. Cook, D.D.S.	2
OBSTETRICS-GYNECOLOGY	James H. Ferguson	14
PATHOLOGY	W. A. D. Anderson	18
PEDIATRICS	Robert B. Lawson	10
PSYCHIATRY	John M. Caldwell	10
RADIOLOGY	Raymond E. Parks	14
	Total	176

STIPENDS

Junior Assistant Resident	$ 900
Assistant Resident	1260
Resident	2100
Senior Resident	3000

Full maintenance is given plus $60 monthly additional for married residents.

tending men appointed by the Medical School from among the practitioners of the Greater Miami area. There are 267 courtesy staff members with 67 interns and 176 residents. As the number of beds are increased by new construction the total number of house staff will be increased accordingly.

Interns are appointed by the hospital administration through the matching plan. Residents are given a co-appointment by the University of Miami School of Medicine and the hospital on recommendation of the chief of service of the specialty concerned. Payment of interns beginning July 1, 1959 will be $100 a month with full maintenance. Payment of residents is divided between the Medical School and the hospital, the former paying the cash stipend, the hospital furnishing the maintenance, including $60 monthly quarters allowance for all married residents and a night cash allowance for food. The cash stipend increases each year to a monthly cash stipend of $250 a month for fourth year residents.

House staff housing

Rooms are provided all interns and single residents in buildings on the hospital grounds. Married residents are provided a rental allowance of $60 a month, provided they live with their spouse in the Miami area. Since the house staff normally reports July 1, [the "off season" for tourist travel to Miami], apartments can usually be found without too much difficulty. A list of available accommodations is maintained by the hospital. Most of the places are furnished. Efficiency type apartments can be rented rather cheaply. Unfurnished apartments are not too plentiful.

Recreation

Jackson Memorial Hospital is located in Miami proper. Miami is noted for all forms of sports and recreation. Fishing, beach bathing, boating and water skiing are available. There are many golf courses within the city. Dur-

Among silent helpers at Jackson Memorial is this automatic laboratory analyzer.

ing Christmas and New Year season there is a ten day festival with parades, pageants, parties, all topped by an intersectional football game in the Orange Bowl on New Year's Day. Some of the finest plays, operas and musicals are booked at the Dade County Auditorium each year, which is located near the hospital.

Health services are provided for all members of the house staff and their immediate families. This includes hospitalization and medication. Blood for transfusion is not furnished.

Malpractice insurance is carried for all house staff and medical staff members.

Wives of house staff members who wish to work should apply to the Personnel office. Nurses and medical technicians are always in demand.

Laundry of hospital uniforms and personal laundry is provided for all members of house staff.

In this rapidly growing area Jackson Memorial Hospital is also expanding. The County Commission has secured fifty acres of land adjacent to the hospital with a policy of developing a medical center around Jackson Memorial Hospital. Two rehabilitation centers have been recently established in this area. Three hospitals are projected with all the area dedicated toward the growth of this large medical center of the South.

For further information concerning internship or residencies write the Director of the Hospital or Chief of Service, Jackson Memorial Hospital, 1700 N.W. 10th Avenue, Miami 36, Florida.

MEDICAL STAFF

Present house staff complement of the hospital is 67 interns, 176 residents, and 617 attending staff members. There are 270 medical students enrolled in the University of Miami School of Medicine.

Physicans turn to Tessalon® to control cough

Single agent with multiple actions broadens cough therapy

A single therapeutic agent developed by CIBA research now does all that has been attempted with combination cough remedies. Extensive clinical trials, involving more than 3,000 patients with acute or chronic cough, have shown that TESSALON *has at least six advantages* that result in better total management of the patient with cough:

1. TESSALON acts peripherally, to control cough in the chest.
2. TESSALON acts centrally, to control cough at the level of the "cough center" in the medulla.
3. TESSALON is reported to thin sputum.[1]
4. TESSALON increases vital capacity and ventilation.
5. TESSALON improves exercise tolerance.
6. TESSALON relieves dyspnea.

Fewer coughs per minute

Shane and co-workers,[2] using the method of Bickerman and Barach,[3] induced measurable cough in 20 volunteers, using a 15 per cent citric acid aerosol as the cough-producing agent. The antitussive efficacy of TESSALON (100 mg.) was estimated to be 2½ times that of codeine (½ grain) in this test.

Cough suppressing activity of TESSALON[2]

	Average Number of Coughs*
No therapy	8.3
Codeine	4.4
TESSALON	1.7

*Based on 5-minute interval immediately following inhalation of citric acid to induce cough. Each patient was tested on three separate occasions.

Controls cough in the chest

It has been shown that the increased sensitivity of the sensory receptors in the lung during inspiration is an important part of the cough mechanism. TESSALON has a selective inhibiting effect on these dilation or "stretch" receptors[4] that helps to control cough where cough begins—at points of irritation in the chest.

Controls cough at the cough center in the medulla

Spinal reflex arcs were studied for the inhibitory effect of TESSALON on the transfer of afferent cough impulses to the efferent branch of the cough reflex.[5] The administration of TESSALON inhibited reflex transmission, when the afferent nerve was stimulated electrically. With this "damping" effect on the cough center in the medulla, TESSALON controls cough centrally, as well as peripherally.

Thins sputum

TESSALON controls cough frequency without interfering with productivity or expectoration. In fact, sputum is usually thinner, easier to raise.[1]

Effect of TESSALON on sputum[1]

Amount		Consistency	
Less	32 patients	Heavier	3 patients
More	2* patients	Lighter	27 patients
Same	16 patients	Same	20 patients

*These patients noted more but lighter sputum.

Increases vital capacity

Respiration usually increases both in depth and volume during TESSALON treatment.[6] In one study,[7] patients with chronic respiratory disease, with and without bronchospasm, showed a mean increase of 19.7 per cent in vital capacity after a 2-week course of TESSALON.

Improves exercise tolerance

By inhibiting stretch receptor activity, and by increasing air intake, TESSALON enables patients to tolerate exercise or work better, eliminates many paroxysms of coughing.

Relieves dyspnea

Farber and Wilson[8] note that one of the important contributions of TESSALON to cough therapy is "...its action as a reliever of dyspnea in some patients." Shortness of breath, wheezing, weakness, "blackouts" are not likely to trouble the patient treated with TESSALON.

Fast, prolonged action

The cough suppressant effect of TESSALON starts rapidly—usually within 15 to 20 minutes. The duration of effect is prolonged—usually from 3 to 8 hours.

ications

SALON is indicated in acute and chronic gh.

TE: Common cold, Bronchitis, Pneu- nia, Upper respiratory infection, Pleu- , Spontaneous pneumothorax, Bronchial tation provoked by gases and foreign ies. CHRONIC: Pulmonary emphysema, nchitis (emphysematous, asthmatic), nchial asthma, Tuberculosis, other nic pulmonary diseases, Pulmonary or diastinal tumors

CEDURES: Bronchoscopy and bronchog- y, Thoracentesis, Thoracic surgery

age

LTS: Average dosage is one Perle (100) t.i.d. If necessary, or where cough is actory, up to 6 Perles (600 mg.) daily be given.

LDREN UNDER 10: One Pediatric Perle mg.) t.i.d. is the usual dosage.

Perles should be swallowed without wing, and, if necessary, with a liquid. ease of TESSALON from the Perle in the uth produces a temporary local anesthe- of the oral mucosa.

e Effects

SALON is well tolerated. Only occasional- ave side effects been reported. Skin rash, al congestion and a vague "chilly" sensa- have been mentioned. In rare instances, trointestinal upset, constipation or seda- have been observed. No adverse effects respiration, kidney or liver function tests, od count or urinalysis were reported.

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le form (liquid-filled gelatin spheres) vides speed of liquid medication—con- ience and dosage accuracy of capsule lication. In two strengths: 100-mg. es (yellow), for adult use; 50-mg. es (red), for children under 10.

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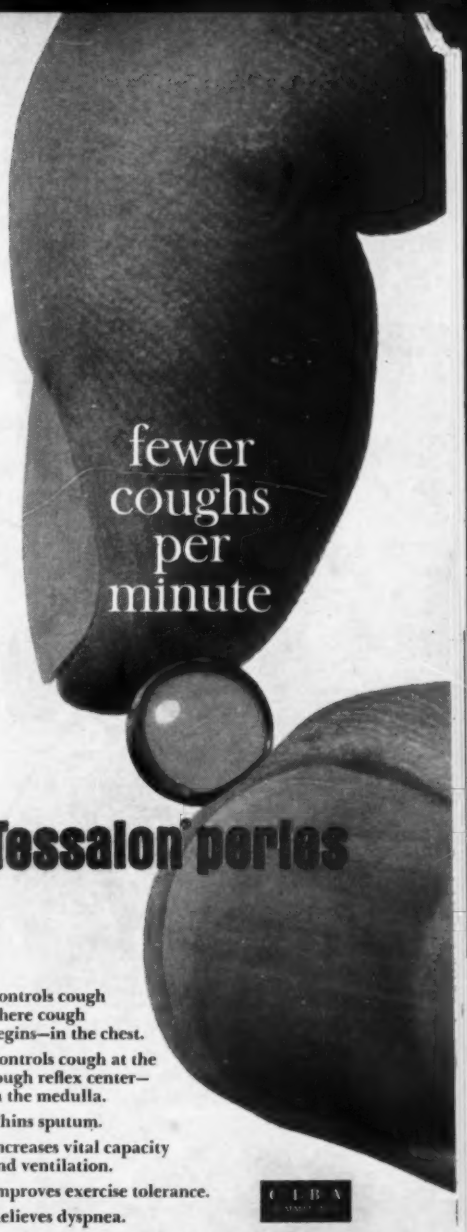

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WHEN SURGERY WAS CALLED MURDER

Called a murderer by stirred-up townspeople, a courageous doctor from the backwoods of Kentucky startled the medical world when he put his faith and scalpel to an "impossible" task.

Edward R. Bloomquist, M.D.

December 13, 1809.

A tired country physician nosed his horse through the open gate of Blue Spring Ranch at Caney Fork, having traveled more than sixty miles from his home in Danville, Kentucky. Although in failing health, the doctor was needed—the need was urgent.

And Ephriam McDowell, M.D., had never been known to refuse a request for help.

Fatigue was heavy on his shoulders as he dropped from the standing horse and painfully stamped his feet to bring life to the aching muscles. The cold winter wind cut through his clothing and he shivered involuntarily as he glanced about him.

Blue Spring Ranch was desolate at this time of year. In warmer months the ranch brought its owner, Thomas Crawford, good crops of tobacco and wheat. Now, snow and ice gripped the bleak fields, and except for the stiff-legged plodding of a few farm animals moving slowly in the cold, the place was quiet.

Worried

The Crawfords, nearing the far side of middle age, were expecting their sixth child. Jane Craw-

ford, long overdue according to the calculations of her doctor, was apparently in an agonizing, prolonged labor. As her irregular pains continued, her physician began to worry. Mrs. Crawford was not progressing as she should. Additional consultation was arranged.

The second doctor was also puzzled and as disturbed by what he saw as the Crawford's family physician had been. The patient was at a point where it was obvious they dared delay no further in obtaining surgical consultation. It was then that the call for help had reached McDowell. The attending physicians sent for him only as a last resort, for while all physicians in this area respected McDowell as an excellent surgeon, most regarded him with suspicion and jealousy. His European training, extensive practice, intense, retiring personality and strict religious standards had offended many of his contemporaries.

With the exception of this annoying professional jealousy which dogged him to his death, McDowell was recognized as the first, and for a long time the only well-trained surgeon west of the Allegheny Mountains. As such, he was the final word in surgical problems.

McDowell entered the farmhouse. Briefly he acknowledged the greetings of the doctors who had called him, exchanged a few words concerning the patient, and then slowly walked to the woman's room.

Pain

As he silently observed the changing expressions passing over Jane Crawford's face, McDowell was provided with a sensitive indicator of the severity of the woman's distress. When the pain held her, her full grey eyes disappeared in a mass of wrinkles as she squinted to avoid crying out; her normally straight lips firmed into a line. When the contraction passed, her drawn face relaxed for a few moments in a restless sleep.

McDowell examined her. Gently, his fingers ran over the distended abdomen. Then, performing a vaginal examination, he found the large mass to be freely movable. But he also found that what was supposed to be a fetus was in no way related to the uterus which manual examination revealed to be of normal size.

A wave of compassion spread over McDowell's face. Certainly the woman was not pregnant. Most probably her difficulty was

the feared diagnosis: ovarian tumor.

If he was correct, Jane Crawford had at best, two torture ridden years before being claimed by death.

Diagnosis

The surgeon reported his findings to his colleagues. They felt that McDowell should explain the situation to the Crawfords.

The surgeon had never seen a tumor of this size successfully removed at surgery. In fact, abdominal surgery of any type was regarded as an impossible procedure; leading surgeons of the day felt it had nearly a one hundred percent mortality.

The only hope he could offer his patient was the thought that perhaps God in His mercy would perform a miracle. And unless such a miracle did occur, Jane Crawford was doomed.

McDowell turned to the suffering woman to relate his findings.

He knew that if he followed the surgical philosophy of the day, this woman was doomed. He had studied the outcome of previous abdominal surgeries and knew the probable consequences. On the other hand, if he had the determination to perform surgery —and it would be experimental surgery at best—there was a chance he could save her.

He told her of the alternatives, then presented a daring proposition. If he performed the "impossible" surgery and she died, he could well be accused of murder. Her eyes opened wider as he said this. Yet, he was willing, he continued, to risk his reputation—an excellent one built upon fourteen years of hard work—and perhaps, endanger his own life for the remote chance that he might save her.

However, to have the best possible working conditions, he told Mrs. Crawford she would have to go to Danville for the surgery. This meant she must consent to run the risk of dying on the operating table, or worse, die on the journey to Danville.

Decision

It must have been difficult for McDowell to make this proposal, one which was contrary to his training, his judgment and his own nature. But for Jane Todd Crawford, the decision was even greater. Sixty painful miles to Danville, on horseback, exposure to wild animals and marauding Indians, the pain becoming worse as the tumor was wrenched from side to side by the horse's movements.

She was faced with an almost overwhelming picture of adverse odds. She knew the journey would be constantly interrupted by recurring abdominal cramps and the frenzies of pain they produced. She also knew of the possibility that the rough ride might tear the tumor from its pedicle, leaving her to hemorrhage to death in the middle of an unfriendly wilderness.

But Jane Crawford had faced pain and death before. And now it was clear that the two years of remaining life had little to offer her except increasing pain. When McDowell offered a ray of hope, slight though it was, she decided to place herself in the hands of God and His servant. She didn't speak, but nodded her head in assent.

Jane Todd Crawford and the frontier surgeon had come to a decision. Now, it was time for action.

Frontier

Ephriam was born on November 11, 1771, in Rockbridge County, Virginia. In 1784, the family migrated to Kentucky, a wilderness on the fringe of the Virginia colony, where Sam McDowell became a judge of the First District Court. Immigrants continued to arrive at this new settlement and within a short time the town of Danville developed around it.

Ephriam was not well educated as a youth, but he took advantage of the best the frontier had to offer. And when Transylvania Seminary (an institution destined for a significant place in frontier education) was established in 1785, he became one of its first students. In 1790 the Seminary became Transylvania University, the first major educational facility west of the Alleghenies.

In 1793, Ephriam McDowell left America for the land of his ancestors. For two years he was a student at the University of Edinburgh. Compared to the rough rugged frontier of his growth, Scotland was a fantasy land. Although his mannerisms were primitive in some ways, the tall, broad shouldered, athletic young man found no difficulty making friends. His open, friendly, almost square face and genial manner, developed during his twenty-two years of wilderness life, gave him an easiness of association which surmounted the obvious contrast between himself and his urban bred associates.

McDowell was not a brilliant scholar, but he applied himself diligently. He thought of being a country doctor and very little

else. Used to rugged living, his independent spirit and unusual self-reliance, novel in Edinburgh, gave his instructors many moments of concern. Even so, they regarded him as a promising physician.

Surgery

Surgery and anatomy fascinated him, but internal medicine was a bore. It was too slow. Surgery on the other hand offered a dramatic method of therapy which appealed to his pioneer spirit, for deeds, not words were the order of the day in Kentucky. (His antipathy toward medicine progressed until it became one of contempt. At one period of his life he was known to refer to it as more of a curse to humanity than a blessing.)

Having found his forte, McDowell spent all his energy trying to find out everything he could about surgery. Glancing about him he discovered the fields he loved the best were being taught in greater concentration and by better men in private schools than they were in the University. Thus, after two years of University training, he left for private instruction by Dr. John Bell, a prominent teacher-clinician in Edinburgh.

When he returned to Danville, he traversed his practice area of hundreds of miles on horseback, performing all the known operations of the day in crude, picturesque settings.

There were six McDowell children, two sons and four daughters. The older son, Shelby, might have followed in his father's footsteps had not an unkind fate decreed otherwise. At an early age he inhaled a wheat spear and before help could be summoned he died of respiratory obstruction.

The younger son manifested a dislike for medicine, punctuating his disinterest by fainting each time he came in contact with blood.

Deliberate, accurate

As a surgeon, McDowell was scrupulous. He insisted upon studying and outlining, whenever possible, the anatomy and technical approach to all proposed surgery. His assistants were stringently rehearsed in their roles and carefully trained in anatomy, for McDowell did systematic dissections in his own laboratory.

During surgery he was deliberate and accurate. He had to be! He had no relaxation, no anesthesia, no modern instruments as we know them today. He operated

with intense concentration, sweating liberally, regardless of season or temperature.

He liked to operate on Sunday. First, it was quiet — little other activity was planned for that day. Secondly, he felt support in the idea that the congregations were praying for him as he went about his work.

Much of his surgery was performed in the patient's home. The rest he did in his own home, for Danville did not have the luxury of a hospital. His intense religious spirit was apparently a source of strength to both him and his patients. He was never known to operate without a session of prayer. Frequently, he would write his prayers on slips of paper, carrying them in his vest as he operated.

He was known as an excellent surgeon, but a "poor fever doctor." This is not surprising considering his contempt for internal medicine, a contempt which prompted him, whenever possible, to turn all such cases over to his associates. He kept few records, disdaining to write much of anything except his presurgical prayers.

Preparation

This, then, was the type of man who quietly left the house of the

FIGHTING LINE

McDowell was a man with an extraordinary background. His ancestry included a long line of stubborn Scotch warriors of the clan Dowell. His great-grandfather, grandfather and father had all engaged in historic battles. The first Ephriam had fought in the English Revolution, enlisting at age sixteen. Grandfather John was killed in an Indian battle on Christmas day, 1742. Dr. McDowell's father, Samuel, played an important role in the American Revolution, having fought under Washington as a colonel. In 1776, the elder McDowell was a member of the convention at Williamsburg, Virginia, which instructed its delegates to the Continental Congress to declare the colonies free. He was president of all the early Kentucky conventions and was one of those who framed Kentucky's constitution. When Kentucky was admitted to the Union in 1792, Sam McDowell was president of the convention responsible for the step.

Between battles and political responsibilities Sam and Mary McDowell found time to raise eleven children. One of these, Ephriam, was destined to enter the hall of medical fame.

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William Crawfords in mid-December, 1809, climbed upon his waiting horse and headed back to Danville to prepare for his forthcoming "experiment."

Shortly after, Jane Crawford, accompanied by neighbors on her journey, awkwardly mounted the sidesaddle of her horse, balancing the tumor on the horn of the saddle. Four days later, she arrived in Danville. Here, she was a guest in McDowell's home until she recovered sufficiently from the trip to undergo surgery. Some days later, she walked with assistance to the room chosen for surgery.

This was a morning somewhat different from those to which McDowell was accustomed. Normally, the town raised prayerful hearts and voices in his behalf as they went about their tasks. Today, it was quite the opposite. The town was disturbed at McDowell's proposed breach of surgical taboos.

Even his nephew James McDowell, newly graduated from Philadelphia, whom Ephriam had chosen to take over his work because of continuing poor health, opposed him. The young man had no desire to become involved in this radical undertaking. If it failed it could ruin his as yet unestablished reputation. Thus, he refused to even come into the room where the operation was to be performed.

As he thought about it, however, the idea must have struck him that if the surgery was successful he would be associated with a miracle, for at the last minute, on the morning of surgery, he agreed to assist McDowell.

The town parson also had something to say about the proposed operation. Having nothing more to contribute than criticism, this itinerate minister did his best to stir the townspeople against McDowell. Falsely assuming the role of prophetic interpreter of the purposes of God, an event not uncommon among theological critics in the history of medicine, he denounced McDowell as a murderer.

It is easy to condemn this clergyman, in retrospect, as a fanatic, an obstacle to progress. At that moment, however, he reflected current medical opinion. If McDowell had been living in the shadows of the University of Edinburgh, it is probable that Jane Crawford would have been doomed to death and McDowell would not have been the first oophorectomist. Smothered by cautious consultation and overshadowed by the fact that he was

attempting something considered impossible, even McDowell might have reneged.

One cannot blame the physicians either. Without this cautious attitude, far too many "experimenters" might have been given free rein to dismember and destroy unwitting patients.

Whether right or wrong, a fanatical gesture or inspired conviction, the time had come to debunk the long adhered to theories of never operating upon the abdomen. Fate had chosen the capable Ephriam McDowell.

In Danville, McDowell was surgery. He had no competition, no opinions more learned than his, no set of rules stating what he could or could not do in applying his surgical techniques. In what he did he was governed by his faith, his knowledge and his responsibility to his patients.

Having convinced himself he was in the right, McDowell decided to go ahead as planned, despite the opposition.

He retired to his quarters the evening before surgery and spent many hours in prayer. One of these prayers he wrote on a slip of paper, planning to carry it with him in the morning. It proved to be far more than a source of spiritual solace. The written prayer provides documentary proof of McDowell's real interest in performing surgery on Jane Crawford—an interest directed entirely toward her benefit.

"Almighty God be with me I humbly beseech Thee, in this attendance in Thy Holy hour; give me becoming awe of Thy presence, grant me Thy direction and aid, I beseech Thee, that in confessing I may be humble and truly penitent; in prayer, serious and devout; in praises, grateful and sincere, and in hearing Thy word, attentive and willing and desirous to be instructed. Direct me, oh! God, in performing this operation, for I am but an instrument in Thy hands and am but Thy servant and if it is THY *will, oh! spare this poor afflicted woman. Oh! give me true faith in the atonement of Thy Son, Jesus Christ or a love sufficient to procure Thy favor and blessing; that worshipping Thee in spirit and in truth my services may be accepted through His all-sufficient merit. Amen."*

With the coming of daylight, Jane Crawford arose and prepared herself for surgery.

This true account of a courageous surgeon and his brave patient will be concluded next month.

Producing Tomorrow's Doctors Today

Presented here, in this the month of the March of Dimes, is a special report on a National Foundation effort in support of doctor education.

Edith A. Aynes*

Medicine is faced today with a new kind of problem, one which the profession cannot solve by itself and one which calls for new concepts.

The problem, briefly stated, is the widespread need for comprehensive medical care—complete and humanitarian service to American communities.

Medical educators, aware of the seriousness of the problem, are searching for techniques in education which will:

- provide the young doctor with a sound basic medical education aimed at clinical excellence
- stimulate him to continue to study throughout his career so that he may stay abreast of new medical developments
- re-establish, so far as is possible under existing conditions, the close doctor-patient relationship so necessary to good medicine
- teach him the importance of utilizing the skills of medical associate professions in meeting the total needs of his patients

A good example of what educators have accomplished is the four-year-old program at Western Reserve University Medical School in Cleveland. This is one of 15 medical schools receiving grants from the National Foundation to conduct pilot studies to determine how to teach the kind of medicine that recognizes not only the medical, but the sociologic and economic needs of patients.

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* Coordinator of Information, Department of Professional Education, The National Foundation.

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"Medicine has always sought the skills of other professional groups when it was demonstrated that they were useful for patient needs," explained Dr. T. Hale Ham, chairman of the committee for medical education at Western Reserve. "Take the chemist for example. When medicine found that chemistry had an important bearing on the human organism, the chemist was approached with a suggestion that his profession be related to the needs of man. As a result, the biochemist was created."

Responsible

Western Reserve's new curriculum introduces the "doctor-in-training" to the human element of society at the same time it introduces him to cell structure, the growth and development of the human organisms and the basic sciences.

The student becomes responsible to a limited degree for his first "family" at the beginning of his first year in medical school.

Immediately after the start of the first semester, the student is assigned to follow the prenatal course of a normal pregnant mother. He is introduced to the patient as a doctor-in-training, and the patient is told that he will see her along with the obstetrician on all subsequent visits.

The student listens to the obstetrician's interviews with the young mother-to-be, learns to take blood pressures, do urine analysis, and begins to correlate structure, function, growth, behavior, and the effect of environment in dealing with the problems of his patient.

At a bench in a new type of multidiscipline laboratory that has been assigned to him for his exclusive use during his four years in medical school, he studies concurrently cell biology, tissue biology, the neuromuscular, cardiovascular and respiratory systems, metabolism, and the endocrines.

Equally important to him is his contact with other disciplines at the outset of his education. His "family"—the maternity patient at this point—has been carefully selected for him the year before he arrives in medical school. This is done by a medical social worker who, in her interviews with new maternity cases, finds "normal" patients willing to assist with the school's educational objectives.

New focus

The young student is introduced to his patient by the medical social worker who briefs him on the patient's social and eco-

nomic problems that may have a bearing on her pregnancy.

Thus the student learns early in his career that the patient is more than a body in a bed and that a medical social worker, a skilled professional, usually with a master's degree in social work related to medicine, is a person who can be extremely helpful to him in his practice of medicine.

In explaining this, Dr. John L. Caughey, associate professor of clinical medicine and associate dean of the Medical School, said:

"In the past, the medical student's first relationship with patients has been on the hospital wards. The patient is in the hospital because he is sick and his medical needs far outweigh all of his other needs. It is only natural that under this system, the focus for the student is entirely medical. If the doctor is unable to help the patient medically, all he has to do to get rid of him is to write 'discharged' on the chart.

"Under the new concept, the patient has been taken out of this highly distorted setting and the student realizes that the social and economic aspects of the patient's problems may be contributing causes of his medical problem."

The first year medical student often does not realize the importance of his relationship with the patient, Dr. Caughey said, until the time for delivery arrives. Since patients attending the maternity clinic are delivered in one of the University hospitals, the staff doctor attending the delivery is different from the one conducting the prenatal clinic. Thus, the medical student is the only familiar face the patient sees as she approaches one of the most important events in her life. A significant event for the student too, for now he begins to see the importance of a close doctor-patient relationship.

Patients who have been closely followed by medical students for three and four years often do not want staff doctors to move them or give them treatment unless "their own doctor," the student, is first consulted. As one student wrote concerning this experience:

"The attitude of the family toward me gradually changed. Instead of just an interested observer, I became a physician. Because they thought that they were now represented in the hospital clinics by one person who was interested in their health problems, they gradually came to think of the hospital as a more friendly place."

As soon as the mother is delivered, the medical student be-

comes responsible (under the close direction and supervision of an obstetrician and a pediatrician) for his mother and baby. Appointments are made regularly in the Family Clinic, a department under the direction of Dr. John H. Kennell, assistant professor of pediatrics. Some 320 medical students work in and around the clinic, a teaching device made possible by a grant from the Commonwealth Fund.

Phases

Medical education at Western Reserve is divided into three phases. Phase 1 lasts for one academic year, and as has been noted, is devoted to normal structure and function. The next three semesters, phase 2, are devoted to disorders of structure and function; the last three semesters, phase 3, to gradually more intensive clinical and elective programs.

The teaching in phases 1 and 2 is done around subjects selected by subject committees. These are carefully chosen interdepartmental groups representing each of the disciplines having a major contribution to make to the subject, and including in all cases at least one clinician. The subject committee selects what should be presented to the students, thereby eliminating undesirable duplication so often found when decisions are made by separate departments.

Dr. Caughey believes, along with his colleagues, that this integrated presentation helps the student to see the application of basic sciences to clinical practice. As related above, structure and function of organs are presented to the student in terms of functional units, which are approached in the way a physician approaches a clinical problem, not as separate disciplines in anatomy, biochemistry and physiology.

As the young doctor-in-training progresses from phase 1 to phase 2, he gets to know the other siblings in "his" family, and he assumes graded responsibility for the health and welfare of both mother and father. He learns that not all patients keep appointments and that not all patients take the medications ordered; he learns of the "rating" of patients and their ability or inability to pay for health services they require.

Groups

For teaching purposes, students are divided into groups of eight. Each group, in addition to having access to the staff and

faculty at the school, has a clinical preceptor, a practicing physician in the community who has an appointment on the faculty. The preceptor meets with his students individually and in groups for two hours each week to discuss problems arising both within the families and in the student-family relationship.

Visits to the patient's homes are arranged through the city's Visiting Nurse Association. The doctor-in-training, accompanied by a visiting nurse, observes and weighs environmental factors—housing, family, neighborhood—which may influence the case.

Starting at the beginning of phase 3 (the middle of the Junior year), students meet in groups of eight in Continuity Clinic one afternoon a week, for the next 14 months. Under the supervision of a physician preceptor, they undertake the long-term care of a small group of outpatients selected to represent various types of chronic illness. Into this "practice" are also brought the adult members of his "family," so that the student now becomes a true family doctor, still under supervision.

Students also have an opportunity to work up fresh cases and treat acute illnesses in ambulatory patients through a two months' intensive outpatient assignment to Group Clinic. When a patient first seen in Group Clinic proves to need prolonged medical care, he may be transferred to Continuity Clinic. Both clinics are under the direction of Dr. Scott R. Inkley, assistant professor of medicine, and together they provide a representative picture of the types of illness and patients a doctor might see in his office.

Whole person

Probably most satisfactory from the patient's point of view is the stable relationship that evolves under this system. Consultants in surgery, medicine, psychiatry, orthopedics, radiology, pediatrics—in fact in any specialty—are available to the patient's student doctor. Instead of being scheduled in various clinics to be studied as separate organs, the patient is "continued" as a whole person with one doctor who assimilates all of his problems into a single total.

Beginning with phase 3, students are no longer referred to as "doctors-in-training" to the patients. They are called "Doctor" by patients, staff and faculty.

"Our students are carefully selected college graduates," Dr. Caughey said. "We regard them

as junior colleagues capable of accepting increasing responsibility for their own education, for the care of patients, and for a professional role in community health services."

Continuity

Key words in this concept of medical education are *responsibility* and *continuity*. Continuity of relationship between student and patient and between student and instructor in this preceptoral type of teaching gives the student an opportunity to learn attitudes and objectives from a mature physician.

George B. Rankin, a student in phase 3, puts it this way: "You get a chance to relate everything you learn to patients and you have the security of an older man who has had experience. The nice part of it is that he advises you but does not treat the patient himself."

Student Rankin's preceptor, Dr. Louis W. Ladd, Jr., senior clinical instructor in medicine, was equally enthusiastic: "I've learned more about what can be done for the patient since I've been acting as preceptor than I have learned in 20 years of practice."

And what about the patients? How do they respond? The Western Reserve School of Medicine Alumni Bulletin recently reported: "There is no better example of the improvement of the physician and patient relationship than that demonstrated in the Family Clinic. Over a three-year period the number of appointments not kept by the families dropped to one-third of the initial level." At the same time, of those who couldn't keep their appointments, an increased percentage made it a point to notify their student-doctor of this fact in advance.

Tomorrow's doctor

The new curriculum at Western Reserve, with its emphasis on better and more complete patient care as well as sound training in basic science, is expensive. Generous endowments and large grants from private foundations carry much of the cost, but millions of Americans are contributing to the training of tomorrow's doctor through grants such as that of the National Foundation.

Responding to the needs of mankind has always characterized the best in medicine. With this as their guide, U.S. medical schools are testing new concepts and curriculums to produce better doctors for tomorrow's patients.

Last of a Series

Medical Ethics and Etiquette

Perrin H. Long, M.D.

Section 10. The honored ideals of the Medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving the health and well being of the individual and the community.*

This final section of the Principles of Medical Ethics deals with the responsibility of the physician towards the health and well being of society in general, and to his immediate community in particular.

What is called Public Health, was, until relatively recent times, frequently suspect by the practitioner of medicine. It required him to do things at times, such as filling out birth certificates, reporting certain diseases, etc., which he considered to be a nuisance, or actually uncalled for. Then around the turn of the century, in the eyes of a number of practitioners, public health activities took on a sinister aspect, because public health officials became concerned not only with the prevention but even treatment of tuberculosis, diphtheria, venereal disease, etc. In other words, public health activities appeared to certain practitioners to be a threat to their practice of medicine and hence their economic security. It has always seemed to me that nothing arouses the righteous and vocal streak more rapidly in my colleagues, than a threat to what they consider the proper economy of medical practice. However, this reaction, while hedonistic, also demonstrates that the doctor is a normal human being.

* Principles of Medical Ethics, J.A.M.A. 164:1484 (July 27), 1957.

By and large, this feeling that public health activities constituted a threat to practicing physicians has disappeared, or is disappearing. Practitioners do not often work themselves into a lather over the thought of State or Municipal sanitoria, tuberculosis clinics, venereal disease treatment clinics, immunization programs, mental health clinics, and other activities of modern Health Departments. (There was some problem relative to school physicians, etc. administering poliomyelitis vaccine in the spring of 1956. In certain areas of our country, local medical societies really got up in arms about this.) The main reason for this change in outlook has been the gradual development of social consciousness by physicians, their realization that they don't want to get out of step with the society in which they live, and to the fact that they are convinced that most Health Department activities do not constitute an economic threat to their way of life. In 1958, the up-to-date conscientious practitioner demonstrates an active interest in all programs which are designed to improve the welfare, health, and well being of the residents of his community. He must be aware of the pros and cons of proposed health and welfare programs in order that he may intelligently support them, or if the need be, just as intelligently, combat them. He must serve on committees, on health boards, cooperate with health authorities, and in every possible way bring his influence, and that of accurate (not fuzzy) modern medical thinking which he represents to bear on the activities of the local health and welfare departments. It is not only his right as a citizen to do so, but also his duty as a doctor to take a very active interest in the health and welfare of his community. And, as part of this duty, he "should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases . . . . . should notify constituted public health authorities of every case of communicable disease under his care . . . . . (and) *when an epidemic prevails, ... must continue his labors without regard to the risk of his own life*" (italics mine). (1955 Edition of The Principles of Medical Ethics).

It is important that medical information be honestly, clearly, and properly presented to the lay public. Hence, it is considered ethical for a physician to meet the request of the American Medical Association or any of its con-

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stituent or component medical societies "to write, act, or speak for general readers or audiences" (1955 Edition of The Principles of Medical Ethics). In practice, it has been accepted without question, as far as I am informed, that a physician may speak or write for lay consumption when asked to do so, by organizations such as the Heart Association, the National Foundation for Infantile Paralysis, and the American Cancer Society, to name but a few of such groups. Furthermore, as far as I am aware, constituent societies have not objected to their members addressing local service clubs, such as Rotary, Kiwanis, Lions, etc., on subjects of current medical interest. Furthermore, it is not considered unethical for public relation committees of societies, or physicians themselves, to interpret for the press medical data which has been presented at a medical gathering. It also appears permissible (at least I have heard of no great outcries against the practice) for Medical Schools or Universities to release information relative to various phases or aspects of medical research, which are being conducted in such institutions. *In all such dealings with the laity, the press, the radio, or television, the doctor who is utilizing such media must remember that good taste, restraint, and modesty on his part must be the order of his performance, and that he must not in any way offend his colleagues by giving the impression that he is attempting to advertise or aggrandize himself by his performance. Should he attempt the latter, his behavior is definitely unethical.*

Finally, as all of us are aware, the field of medical public relations is continually expanding. Experience has shown that this has paid off with our people. Therefore, authoritative articles prepared for magazines of national circulation or the newspapers on advances in medicine, help create confidence among the laity. These articles are greatly strengthened and their authority attested to, if they bear in writing, the statement that they have the approval of a responsible body such as the American Medical Association or one of the constituent or component societies, major medical research groups, major professional societies, medical schools, or the proper medical agencies of government at the federal, state, or municipal level.

Mediquiz

These questions were prepared especially for RESIDENT PHYSICIAN *by the Professional Examination Service, a division of the American Public Health Association.*

Answers will be found on page 185

1. Leiomyosarcomas of the stomach usually have their distant metastases in the:

A) Ovary.
B) Central nervous system.
C) Liver and lungs.
D) Spleen and pancreas.
E) Skeleton.

2. The major hazard from traumatic incarceration of uveal tissue of an eye is:

A) Brain abscess.
B) Permanent loss of vision in the affected eye.
C) Secondary glaucoma.
D) Pyogenic meningitis.
E) Sympathetic ophthalmia with ultimate destruction of both eyes.

3. A lesion in the temporal lobe is likely to give rise to:

A) A complete homonymous hemianopsia.
B) Unilateral scotomata.
C) A quadrant homonymous hemianopsia.
D) Congruous homonymous scotomata.
E) Incongruous homonymous scotomata.

4. Congenital glaucoma, or buphthalmos, is due to interference with the filtration of fluid from the eye as a result of a:

A) Congenital absence of the central vein with resulting increased vitreous pressure.

NOTE: If you are interested in preparing questions for *"Mediquiz"* or the Professional Examination Service, write for information to the Professional Examination Service, 1790 Broadway, New York 19, New York.

B) Congenital internal hydrocephalus with choking of the disc.
C) Shallow anterior chamber and a constricted pupil.
D) Congenital defect at the angle of the anterior chamber and angle of Schlemm.
E) Congenital defect at the angle of the posterior chamber and the limbus.

5. The frequency with which glomerulonephritis occurs as a complication of scarlet fever is:
A) 0.1 percent.
B) 1 percent.
C) 10 percent.
D) 20 percent.
E) 40 percent.

6. The incubation period of yellow fever in man is:
A) 24 hours.
B) 3-6 days.
C) 1 week.
D) 2 weeks.
E) 2-3 weeks.

7. Following a dog bite, tetanus may often be distinguished from rabies by the development of:
A) Paralysis.
B) Stupor.
C) Convulsions.
D) Fever.
E) Trismus.

ADJUSTED ANALGESIA

	LEVO-DROMORAN				NISENTIL				PANTOPON		
	1 mg	1-1½ mg	2 mg	2-3 mg	20 mg	20-30 mg	40 mg	40-60 mg	2.5 mg	5-10 mg	10-20 mg
acute pain		IV		SC							*
biliary colic		IV		SC				SC			*
biopsies					IV		SC				
burns					IV		SC				*
cardiovascular pain								SC			*
cough control									*		
drainage					IV		SC				
dressings					IV		SC				
endoscopy						IV					
gangrene				SC/PO							*
home care of chronic pain				PO							*
intractable pain				SC/PO							*
incisions					IV		SC				
labor pain								SC (60 mg)			
major surgery preop.	IV		SC			SC	SC				
major surgery postop.			SC								
migraine				SC/PO							*
minor surgery					IV		SC				
neoplasm				SC/PO							*
neuritis				SC/PO							*
office procedure						IV					
quick analgesia								SC			
renal colic		IV		SC		IV		SC			*
recurrent pain				SC/PO							*
sedation plus analgesia										*	
trauma		IV		SC							*

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RP REVIEWS BOOKS

About Doctors

Conducted by SAUL A. KUCHINSKY

THE DOCTOR BUSINESS. *Richard Carter. Doubleday. $4.*

This most provocative book in recent years on doctors, patients and the practice of medicine in America is a caustic attack on "organized medicine" for its "abuses of the patient's person and pocketbook through unnecessary surgery, excessive fees, inadequate health insurance, professional neglect and outmoded approaches." It insists that these abuses and more are not individual excesses but a widespread pattern.

The author, a free-lance writer for popular magazines, blames not the individual doctor, who is a "dedicated scientist and a devoted healer" but "an inadequate system of medical practice perpetuated by an unduly powerful confederation of medical societies headed by the AMA." And "AMA and its subordinates," he writes, "are dominated by untypical physicians . . . with well-established practices . . . inde-

pendent incomes . . . hungry for the limelight."

Of equal rank with AMA as the author's chief devil is "the fee-for-service system." Mr. Carter plumps for prepayed group medicine as practiced by Kaiser-Permanente in California and HIP in New York. He wants massive federal aid for the building of new medical schools to eliminate the doctor shortage. AMA, he says, denies a shortage and says any aid should come from private philanthropy or highly controlled state aid. He attacks fee-splitting, kick-backs to druggists and the like, over-utilization of hospitals by patients with hospitalization insurance and deliberate doctor charging beyond the patient's insurance.

The author's shortcomings are many. His language is a brusque, unequivocal harangue. He deals too often in half-truths, as when he blames medicine for the Salk vaccine fiasco and barely mentions that the White House effectively out-AMA'ed the AMA in its opposition to widespread free inoculation. Or when he attacks medical defensiveness in regard to the malpractice suit and

says next to nothing about the wholesale, noxious, restrictive racket it has become in this country in the hands of patients and some attorneys.

The author pronounces on matters of clinical medicine that are beyond his ken. Any schoolboy, knows, says he, that hospitalized diabetes patients must have blood tests, etc., etc. He attacks antibiotic combinations as less worthy than the therapy of single antibiotics as if he were beyond Waksman. His bombastic phrases, "One of the most extraordinary documents," "One of the most prominent figures," "The most fetching display of casuistry" are common throughout the text.

But there is no question that the documentation for much of the author's complaint is impressive and shows the house of American medicine to be not entirely in order. The book will be widely read and reviewed, become the subject of many a lively coffee klatch and, we hope, spur the correction of the abuses it so briskly describes.

For the house staff physician, the book is important because it treats of medical-social-economic subjects—not always accurately or objectively—which are not covered on grand rounds.

What's the Doctor's Name?

He was born in Paris of Swiss parents on April 7, 1891.

He received his M.D. from the University of Zurich in 1917. He was to receive three more doctorates in Literature, Letters and Science.

He qualified as a Privatdozent for the history of medicine at Zurich and came to the University of Leipzig to study under the great Professor Sudhoff, whom he succeeded as head of the Institute of the History of Medicine in 1925.

In 1932 he was invited to this country to become Director of the Institute of the History of Medicine and Professor of the History of Medicine at Johns Hopkins University, succeeding the great William Welch. One year later he founded the Bulletin of the Institute.

He resigned from Johns Hopkins in 1947 and returned to

Switzerland to undertake what was planned to be an 8-volume encyclopedic history of world medicine. In 1951 the first volume of this great work was published. It was titled Primitive and Archaic Medicine and dealt primarily with the medicine of ancient Egypt and Mesopotamia. He died suddenly of cerebral hemorrhage in 1957. His publishers promise volume 2 of his history will be out "within 3 years." It will cover Greek medicine through Hippocrates and early Indian medicine.

He spoke four modern languages fluently and read Latin, Greek and Arabic easily. He was a skillful public speaker and was Dwight H. Terry lecturer at Yale in 1938, South African Universities lecturer in 1939 and Massenger lecturer at Cornell University in 1940.

He was author, in addition to his interrupted History, of American Medicine (1934), Civilization and Disease (1943), Landmarks in the History of Hygiene (1956) and many other works.

His death in Pura, Switzerland, on March 17, 1957, cut down the greatest medical historian and teacher of his day. Can you name this doctor? *Answer on page 185.*